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# **East Europe Report**

**ECONOMIC AND INDUSTRIAL AFFAIRS**



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21 November 1985

## EAST EUROPE REPORT

### ECONOMIC AND INDUSTRIAL AFFAIRS

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INTERNATIONAL AFFAIRS

**BULGARIA'S FOREIGN TRADE EXPANDS VIGOROUSLY**

**General Survey of Foreign Trade**

Sofia IKONOMICHESKI ZHIVOT in Bulgarian 4 Sep 85 p 8

[Article by Tsvyatko Lilkin, general director, and Stoyan Enev, advisor, at the Ministry of Foreign Trade: "Dynamic Expansion - Successes of Bulgarian Foreign Trade"]

[Text] Foreign economic ties are playing an increasingly important role as a dynamic factor in the development of the national economy and the rapid construction of a material and technical base for the developed socialist society in the People's Republic of Bulgaria. In recent years, Bulgaria's economy has acquired a character that is more and more open and oriented toward international markets. As Comrade Todor Zhivkov emphasizes, in the present stage of development of the national economy, there is and there can be no other way than that of making increasing use of the advantages of our participation in the international division of labor.

The development of our foreign trade demonstrates that this trend is of a lasting and long-term nature. According to actual exports per capita, in 1984 our country ranked first in the Council for Mutual Economic Assistance. The correlation of foreign trade with the national income produced in the country exceeds 101 to 100.

On the basis of stable, economic growth and completion of the tasks of structural adaptation of the national economy to changing external conditions, by guaranteeing highly effective export resources, our country is coping successfully with the ordeals provoked by deteriorating international circumstances. At a time of general stagnation, and even of falling levels of world trade, our foreign trade grew by 8.3 percent in 1984, totaling 25.7 billion leva. For the first time, the value of our exports exceed 55 per cent of the national income, which bears witness to the increasing efficiency of the whole economy. Taken as a whole for the period 1981 to 1984, the average yearly rate of growth of the volume of our foreign trade was 10.6 per cent, against 8.5 percent for the preceeding 5-year period (1976 to 1980).

Together with the rapid, steady growth of our foreign trade - 18 times the level of 1960 - the progressive changes in its structure, above all in the export structure, are continuing. At present, the branch of machine building accounts for over half of it. A product of the long-term strategy for the development of Bulgaria as a modern industrialized nation, whose beginnings date from the historic April plenum of the Central Committee of the Bulgarian Communist Party (1956), Bulgarian machine building continues to strengthen its position in international markets with a wide range of heavy-duty machinery and equipment. Of primary importance in the machine-building catalogue are lifts and conveyors. At present, every fifth truck sold in international markets is of Bulgarian production; and the Bulgarian organization, Balkancar, invariably ranks first in sales and turnover in the world classification of truck-manufacturing companies. The export of Bulgarian electronic goods is expanding at an increasing rate. Over 92 percent of production is intended for export. Export of chemical products is increasing: fertilizers, petrochemicals, pharmaceutical products, aids for crop protection and household chemicals.

The process of close rapprochement between the People's Republic of Bulgaria and the USSR is a decisive factor in the stable and dynamic development of our external trade and the national economy. For a number of years, trade between our two countries has represented 57.5 percent of our overall trade, and in 1984 it reached 14.8 billion leva. In the Soviet market, the People's Republic of Bulgaria has over 60 percent of the market share in the production of machinery and a significant share of the export of consumer goods, manufactured goods and goods from the food and tobacco industry. Thanks to supplies from the USSR, our country satisfies close to 90 percent of its needs in imported machinery, integrated projects and equipment for industry and agricultural technology, and a large part of its needs for a number of important raw materials and energy sources.

At the basis of socialist economic integration, trade ties with other socialist countries are continuously being expanded. At the present stage, their characteristic trait is the increasing demand for quality and efficiency of reciprocal trading and expansion of the exchange of goods on the basis of long-term agreements for specialization and cooperation in production. On the basis of long-term trade agreements with the USSR and other socialist countries that are committed to their state economic plans, the People's Republic of Bulgaria is ensuring stable resources for producing close to three-quarters of her national income.

Throughout the entire period of socialist development, as a result of the consistent policy of peace of the People's Republic of Bulgaria and the increasing potential for export, trade with the developed capitalist nations has steadily expanded. Trade volume in 1984 reached 2.9 billion leva. In the markets of our traditional partners -- Federal Republic of Germany, France, Austria, Switzerland, Sweden, England and Spain -- and of our southern neighbours -- Greece and Turkey -- we are achieving an ever-increasing range of manufactured goods, along with agricultural produce, which is in great demand and preferred, and light industrial goods. Industrial cooperation with leading western firms is expanding and scientific and technological exchange



is developing, including the trade of new technologies, licences and joint development. In 1984 alone, a number of joint companies were formed with the participation of such firms as Sormel-Matra -- in the area of robot production, Dow Chemicals -- in the area of production and trade of chemical products, and Honeywell -- in the area of automation systems.

The People's Republic of Bulgaria maintains broad and continuously expanding ties with the developing nations. She conducts her relations with them on a long-term basis in keeping with the principles of equality and mutual interest. At present, Bulgaria maintains active trade and economic relations with over 70 such countries in Europe, Asia, Africa and Latin America. In 1984, trade volume with them exceeded 2.5 billion leva. The average annual rates of its increase outstrip the average rates of increase in our trade with the nonsocialist countries. The leading countries among these foreign trade partners of the People's Republic of Bulgaria are Libya, Iraq, Iran, Syria, Algeria, Ethiopia, Angola, Brazil, Argentina, Nicaragua, Tanzania and others. Exports to the markets of the developing nations from the People's Republic of Bulgaria include machinery, products of the chemical and pharmaceutical industries, equipment for integrated projects for a number of industrial sectors of agricultural technology and consumer goods.

One important area of cooperation is the establishment of modern joint agricultural companies and agroindustrial complexes in a number of countries, such as Angola, Mozambique, Ethiopia, Afghanistan, the People's Republic of the Congo, Tanzania, Libya, Iraq, etc. Scientific and technical cooperation is expanding and includes both sending Bulgarian specialists to these countries and preparing their professionals in Bulgarian higher and intermediate institutions of learning.

The development of foreign trade ties at the present stage will be determined by the unfolding creative activity in the country for fulfilment of the 5-year plan and by the conquest of new markets for the export of our products. In accordance with the programmed formulations and resolutions confirmed in the February plenum (1985) of the Central Committee of the Bulgarian Communist Party, with regard to external trade, our task is to work even more actively to bring about the transition to a new scientific and technological level of the national economy and its chief sectors. At the basis of this new approach, prerequisites will be set for the future increase of the role and importance of the foreign trade sector and the dynamic development of the national economy, to confirm the international authority of the People's Republic of Bulgaria as a much sought after, reliable and respected economic partner.

#### **Soviet Trade Representative's Comments**

Sofia IKONOMICHESKI ZHIVOT in Bulgarian 4 Sep 85 pp 8-9

[Unattributed article: "An Excellent Present, Fine Prospects"]

[Text] Bulgarian-Soviet trade relations may be characterized in this way. On the eve of the Day of Liberation, a journalist from the editorial staff of



"Ikonomicheski Zhivot" visits the Soviet Trade Delegation in Sofia and talks with the Deputy Trade Representative of the Soviet Union in our country, Venyamin Khitrov. We publish their conversation here.

Comrade Khitrov, let us start with your impressions of Bulgaria's economic development.

With pleasure. We Soviets often remark that, in the past 4 decades, under the leadership of the Bulgarian Communist Party, the Bulgarian people have achieved remarkable successes in the development of material production and in improving the cultural level and wellbeing of the people. In short, in the all-round building of socialism. The revolutionary changes in all spheres of life have allowed Bulgaria to transform herself from a backward country, left in the past, to a modern socialist state with a developed industrial and agricultural base. And today, a number of important economic indices show that she is outstripping many countries that were way ahead of her 4 decades ago. The Soviet people are very happy about all that.

Yes, you are right. But when we speak of successes, we Bulgarians always point out that they were built on the fraternal friendship, close cooperation, and constantly expanding development of economic relations between Bulgaria and the Soviet Union.

That is true. Economic relations between the Soviet Union and the People's Republic of Bulgaria are constantly increasing at a rapid pace (including foreign trade, of course, which is my field) and taking on new forms. And we must emphasize right away that the unflinching alliance between the Communist Party of the Soviet Union and the Bulgarian Communist Party, and their loyalty to Marxist-Leninist principles and proletarian internationalism, determine the development of fraternal friendship and cooperation between the Soviet and Bulgarian peoples and their constant progression to still higher standards. And now, our cooperation has received a strong, new stimulus. Our task is to give life to the resolutions of the high-level economic conference of the member countries of the Council for Mutual Economic Assistance which took place in Moscow 1 year ago. New possibilities are being discovered for intensification and development of integrated economic processes, for the future development of foreign trade ties. And we can say with confidence that the rich economic cooperation between our countries is taking on ever more facets. This is without doubt one of the chief results in the development of economic cooperation between our countries in recent years, and in the development of our trade ties.

You would probably like to talk more concretely about our reciprocal trade relations.

Of course. That's how I earn my bread and butter. And if you ask me what characterizes them, I shall reply immediately: large-scale reciprocal trading. Let me illustrate that with some figures.

At the end of this year, our reciprocal trading will reach 12.2 billion roubles, compared with 0.6 billion roubles for 1980. Every day, our countries

supply each other with goods worth over 33 million roubles. The importance of reciprocal trading in the development of the national economy of the two countries is borne out by the fact that the Soviet Union receives 57 percent of the volume of Bulgaria's total foreign trade, and the People's Republic of Bulgaria steadfastly ranks third in the foreign trade exchange of the USSR.

The figures certainly illustrate the importance of trade for the economies of the two countries. That probably confirms its structure too.

The structure of our trade exchange is especially significant. The USSR supplies Bulgaria with large quantities of items that are essential for the development of her economy: petroleum and petroleum products, coal, natural gas, power, iron ore and rolled iron, chemical fertilizers, lumber, cotton and other goods. Modern Soviet technology, which makes up about one-third of our total exports to the People's Republic of Bulgaria, assists in the incessant modernization of Bulgarian industry and in increased productivity.

Bulgarian exports are probably just as important to the Soviet side.

Of course. Products from machine building and electronics hold a leading position in Bulgarian exports to the Soviet Union. Your country also supplies us with such important goods as calcinated soda, car tires, medicines, clothing and knitware, shoes, perfumes, cosmetics and foodstuffs.

We must point out that an incredible amount has been done for the future long-term development of our reciprocal trade relations. At present, we are actively working to conclude a long-term trade agreement for the next 5-year plan, 1986-1990. Direct cooperation between machine-building companies in the USSR and Bulgaria is being intensified in different ways. Much attention is being directed to improving the quality of the products supplied.

Comrade Khitrov. What new features of our economic cooperation is all this leading to?

One new feature of our present economic cooperation is the expansion of direct ties and reciprocal relations between Soviet and Bulgarian manufacturing companies and between their working collectives. A good example of this is the joint work on the production of a new generation of metal-cutting machines between the Moscow factory "Krasniy Proletariy" and its partners from Bulgaria. As early as last year, in addition to up-to-the-minute engines, Bulgarian companies began to send to the USSR jointly constructed compact power lines for lathes with programmed control and complete transmissions for industrial robots.

At present our cooperation is more and more directed toward acceleration of scientific and technological progress as a basis for intensification of the economy. In the present phase, the Communist Party of the Soviet Union and the Bulgarian Communist Party have determined that this should be the principal direction of economic development in the two countries. In planning our cooperation with fraternal Bulgaria, we are guided not only by the objectives that will decide the future expansion of our ties, but also by the

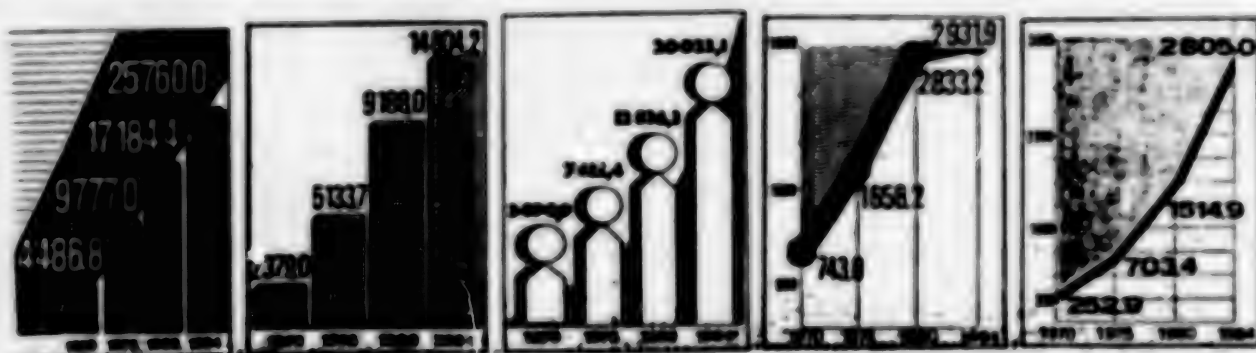
objectives that affect their quality and effectiveness. The Communist Party of the Soviet Union and the Soviet state are striving toward a qualitatively new level of economic integration. Our objective in the long-term is that it will be deeper, all-embracing and effective, with the hope that it will ensure the future consolidation of the economies of the USSR and the People's Republic of Bulgaria, the increase in the living standard of our peoples and the contribution of the two countries to the successful development of the whole socialist community.

Recently Comrades Mikhail Gorbachev and Todor Zhivkov signed an extremely important document for our bilateral relations -- the long-term program for the development of economic, scientific and technological cooperation between the Union of Soviet Socialist Republics and the People's Republic of Bulgaria for the period up to the year 2000. In both countries, the program has been hailed as a fundamental document that determines the principal directions of our coordinated economic policies, of close cooperation and friendship between the USSR and the People's Republic of Bulgaria for a prolonged period of time. For all of us, it is the landmark that will lay out our future joint work.

In conclusion, I should like to emphasize that the development of our countries and our joint cooperation have entered another important phase -- the time of active preparation for the 17th Congress of the Communist Party of the Soviet Union and the 13th Congress of the Bulgarian Communist Party. The communist parties of both countries are mobilizing workers to fulfil successfully the present 5-year plan and to prepare a worthy greeting of the two congresses. And we are convinced that their resolutions shall be a new contribution to the development of friendship and cooperation between our parties, countries and peoples, in the name of socialist construction, of the unity and solidarity of the socialist commonwealth, and in the name of peace and progress in the world.

Thank you, Comrade Khitrov.

Foreign Trade in the People's Republic of Bulgaria (in millions of leva)



Overall      With the USSR      With Socialist Countries      With Developed Capitalist Countries      With Developing Countries

12907  
CSO:2200/4



INTERNATIONAL AFFAIRS

ENERGY PROBLEM IN SOCIALIST COUNTRIES EXAMINED

Sofia NOVO VREME in Bulgaria No 8, 1985 pp 40-50

[Article by Svetlin Stanev: "The Energy Problem Under Socialism"]

[Text] Over the last 10 years the energy problem has become one of the most serious problems of the modern world. The question of providing the national economy of every country with fuel and electric energy, independently of social structure and the degree of development of production forces, has come to assume paramount importance. The energy problem has accordingly been transformed in a relatively short period into one of the main global problems of our times, along with that of preserving world peace, feeding the population, protecting the environment, and so forth.

The aggravation of the fuel and energy problem on a global scale at the beginning of the 1970's forced most countries to review their energy programs, map out new measures for more successful resolution of difficulties, and reinterpret the policy they had been pursuing in the light of the new conditions. The latter also applies to the socialist countries, of course, including Bulgaria.

The report of the Bulgarian Communist Party Central Committee to the 20th Congress states that "one of the most acute world problems, which is also the number one problem for Bulgaria, one directly linked to intensification of the national economy, is provision of energy and raw materials resources for the national economy and the most rational use possible of these resources"(1).

It is typical of the socialist countries that they apply the collective approach to solution of the energy problem, by utilizing the resources and the scientific-technical and production potential of all CMEA member countries. An important contribution is made in this regard by the CMEA permanent commissions in the field of geology and the petroleum, gas, and coal industries, the commissions on electric energy and peaceful uses of atomic energy, as well as the Mir unified energy system, and the Interatomenergoproekt, Interatominstrument, and other international economic associations.

Of no less importance in this respect is application of the integrated approach to solution of this problem in the socialist countries. Specific measures have been planned and carried out in various sectors such as



geological research, production and consumption of fuels and electric energy, increase in the percentage of local energy sources, and above all wider use of solid fuel and more economical consumption of fuel and energy in industry, transportation, public utilities, etc. Here we must stress once again the need for application of this integrated approach not exclusively within the individual socialist country but on a broader international basis. In this connection, Comrade Grisha Filipov stated in his address to the 36th meeting of CEMA that "it is a universally known fact that over the last several years supply of raw materials and energy has become one of the principal factors limiting economic growth," a factor which requires the elaboration of "integrated measures or a program aimed at complete, full-scale solution of this problem on an integrated basis"(2).

Availing themselves of the superiorities of the socialist social structure in this respect, the CEMA member countries have been to a considerable extent able to prepare themselves better than the capitalist countries to face the energy difficulties which arose at the beginning of the 1970's and to avoid many of the serious consequences of the energy crisis which enveloped the capitalist world.

Even at the beginning of the 1960's, i.e., 10 years before the energy crisis exploded in the capitalist world, Bulgaria began to carry out a program for use of low-calorie lignite coal, and at the end of the 1960's a program to speed up the development of nuclear energy. These programs may be said to represent in effect the beginning of improvement in the fuel and energy supply structure of Bulgaria, aimed at fuller satisfaction of the energy needs of the Bulgarian economy coupled with more limited use of critical liquid fuels.

#### 1. Development of Power Engineering in the socialist countries

Energy consumption in the socialist countries has increased 6-fold since 1950, currently amounting to about 3 billion tons of conventional fuel per year(3). This is due above all to the accelerated peacetime economic development of these countries after the Second World War. In the socialist CEMA member countries alone, industrial output per head of population has grown more than 8-fold in the 30 years that have passed since establishment of the organization, as against the world average of 3.2 times, and the share of CEMA countries in world industrial production has risen from 18 percent to 33 percent. The socialist countries' share of total world energy consumption has increased to approximately the same extent over the 1950-1980 period, from 19.2 percent to 31.9 percent(4).

The search for increasing amounts of fuels and energy in the socialist countries over this period has accounted for the accelerated development of the extractive sectors of the economy in these countries, and of the coal industry above all, considering that 45 percent of the world's geological reserves of solid fuel is to be found in the socialist countries, with the exception of Cuba, which has no coal. An important role in the growth of coal mining in the socialist countries has been played by the permanent commission for cooperation in the area of the coal industry, established in 1957. Delegates from the founding countries (Bulgaria, Hungary, Poland, Romania, USSR, and Czechoslovakia) took active part in the meeting in Warsaw establishing the commission. The Mongolian People's Republic, the Socialist

Republic of Vietnam, and Yugoslavia later joined in the work of the commission.

The basic aim of this permanent commission is to ensure rapid and systematic development of the coal industry in the socialist member countries on the basis of the latest achievements in the area of scientific and technical progress in this sector, as well as improvement in the international socialist division of labor and satisfaction of the needs of the individual countries for various types and grades of coal.

Following adoption of the integrated CEMA program for further intensification and development of socialist economic integration in 1971, the permanent commission for cooperation in the area of the coal industry proposed new forms of cooperation, such as joint working of major new coal deposits, joint scientific research and prognostic activities in the coal industry sector, regular deliveries of the necessary amounts, types, and grades of coal over the appropriate five-year periods, and intensification of specialization and cooperation in the manufacture of machinery and equipment for underground and surface mining of coal.

Thanks to the combined efforts applied in this area, the output of coal in the CEMA member countries has nearly doubled since 1955, to reach 1.5 billion tons, one-half of which is hard coal, that is, coal with a calorific value higher than 5700 kilocalories per kilogram. In 1983 the output of hard coal (in millions of tons) was 553.7 in the USSR, 191.1 in Poland, and 2.8 in Hungary. The brown coal output was 278.0 million tons in the GDR, 162.2 in the USSR, 102.4 in Czechoslovakia, 42.5 in Poland, 32.8 in Romania, 32.1 Bulgaria, 22.4 in Hungary, and 4.3 in the Mongolian People's Republic. Large amounts of coal were mined in the same year in socialist countries not members of CEMA (675.1 million tons in the Chinese People's Republic and 37.1 million tons in the Korean People's Democratic Republic)(5).

The structure of geological reserves of primary energy sources in the socialist countries and the geographic distribution of these sources have left their mark on development of petroleum and natural gas extraction. For example, of the total geological reserves of primary energy sources in the European socialist countries and the Chinese People's Republic which it was economically profitable to exploit at the beginning of the 1980's, solid fuels accounted for 84.5 percent and petroleum and gas only 15.5 percent(6). In addition, their geographic distribution is extremely uneven, with the result that these fuels are extracted in a limited number of countries. Thus, petroleum extraction in 1983 (in millions of tons) was 618.0 in the USSR, 12.5 in Romania, and 1.9 in Hungary. In socialist countries outside CEMA, 105.0 million tons were extracted in the same year in the Chinese People's Republic, 4.2 million tons in Yugoslavia, and 4.0 million tons in Albania(7).

A similar situation exists in the natural gas industry, in which only the USSR has large deposits; its geological reserves represent 40 percent of the world's reserves economically profitable to exploit. Natural gas extraction in the four countries in question amounted in 1983 to 535.7 billion cubic meters in the USSR, 39.0 in Romania, 6.5 in Hungary, and 5.5 in Poland(8).

Deliveries from the USSR are of great importance in this connection in meeting the CEMA countries' needs for fuels and energy, and above all for the critical energy sources petroleum and natural gas. Also important in this context are the joint efforts of the socialist countries in development of new deposits in Soviet territory and in building arterial petroleum and gas pipelines. One of the most recent projects in this connection has been construction of the arterial gas pipeline from Orenburg to the western border of the USSR, through which Bulgaria, Hungary, the GDR, Poland, Romania, and Czechoslovakia will receive a total of 15.5 billion cubic meters of natural gas per year. The pipeline length of 2750 kilometers, pipe diameter of 1420 millimeters, and operating pressure of 75 atmospheres make this installation unique from the engineering viewpoint. In construction of the pipeline the CEMA member countries have applied new forms of cooperation, characterized by the fact that each participating member country employs its own resources to accomplish "turnkey" construction (including compressor stations) of the pipeline section assigned to it(9).

Following adoption of the integrated program for further intensification and improvement of cooperation and development of socialist economic integration, the CEMA member countries began even closer cooperation in the area of nuclear power engineering as well. On the basis of the extensive Soviet experience, which created the possibility of building and commissioning the first nuclear power plant in the world (near the city of Obninsk, in 1954), wider use of nuclear energy for peaceful purposes began in other socialist countries. The experience gained in years of operation of electric power generating plants of this type in the USSR has persuasively demonstrated the advantage of building such plants, and especially that nuclear power represents an alternative for countries poor in traditional energy sources, as is the case with Bulgaria(10).

The measures carried out on a multiple-country basis within the framework of CEMA have played an important part in development of nuclear power engineering in the socialist countries and in intensifying their cooperation in this sector. The United Nuclear Research Institute has been in operation at Dubna (in the USSR) since 1956. Bulgaria, Hungary, the Socialist Republic of Vietnam, the Korean People's Democratic Republic, the Mongolian People's Republic, Poland, Romania, the USSR, Czechoslovakia, and Cuba participate in the activities of this establishment. Their cooperation in the work of the institute in years past has enabled them to achieve significant financial and economic performance by lowering of the costs involved in meeting the assigned goals. This performance is due above all to distribution of investment costs among the participating countries, use by all the countries of a single experimental base outfitted with unique and costly instruments and equipment, elimination of duplicate or very similar scientific research programs, concentration of highly skilled personnel at a single scientific research center, and faster and easier dissemination of the results of various research projects among the participating countries.

A permanent commission on peaceful uses of nuclear energy was established in 1960 by decision of the 13th CEMA meeting. For nearly 25 years now this commission has made a very great contribution to the development of bilateral and multilateral cooperation in the field of nuclear energy, nuclear instrument making, radiation safety, and nuclear safety engineering. By a decision of the commission, the international economic association



Interatominstrument was established in 1972 (in Warsaw); the founding members of this association were Bulgaria, Hungary, the GDR, Poland, the USSR, and Czechoslovakia. They stepped up the association's activities even further after 1975, by establishing branches in Bulgaria (at Pleven), Poland (in Zielona Gora), and the USSR (in Dubna). The fundamental aim of the association is increasing satisfaction of the needs of socialist countries for instruments for nuclear engineering by engaging in varied scientific research, experimental, planning and design, production, and commercial activities.

At the end of 1973 the CECA member countries and Yugoslavia signed an agreement on creation of another international economic association, Interatomenergo (in Moscow), with a view toward organizing cooperation in the production of equipment, delivery of the equipment to the respective countries, rendering assistance in planning and design, and construction and operation of nuclear power plants, as well as personnel training. Interatomenergo operates on the basis of annual and long-term plans in the areas of production, commerce, standardization, etc. It also takes active part in drawing up programs for development of nuclear machinebuilding in the CECA member countries on the basis specialization and cooperation.

As a result of the accelerated construction of nuclear power plants in the CECA socialist member countries, especially over the period since 1970, the total capacity of the reactors built and commissioned by the middle of 1983 reached 25,160 milliwatts (50 reactors), this including 20,249 milliwatts (38 reactors) in the USSR, 1840 milliwatts (5 reactors) in the GDR, 1760 milliwatts (4 reactors) in Bulgaria, 880 milliwatts (2 reactors) in Czechoslovakia, and 440 milliwatts (1 reactor) in Hungary (11).

The success achieved by the socialist countries in developing new electric power generation capacities has been an important precondition for the manifold increase in electric energy production, which in 1983 reached the level (in billions of kilowatt-hours) of 1416 in the USSR, 125 in Poland, 105 in the GDR, 76 in Czechoslovakia, 74 in Romania, 42 in Bulgaria, 25 in Hungary, etc. Among the socialist countries not members of CECA, substantial amounts of electric energy were generated in the same year in the Chinese People's Republic (336 billion kilowatt-hours) and Yugoslavia (65)(12).

The Mir unified energy system including the electric energy generation systems of the European socialist countries was created in 1959 at the recommendation of the Permanent Commission on Cooperation in the Field of Electric Power Engineering, and the Central Supervisory Control Administration in 1962 (in Prague). The chief advantages of setting up this administration under conditions of parallel operation of the electric power systems of the member countries are represented above all by detection of the possibility of electric energy exchange between non-adjacent countries, reduction of the total maximum load on the unified system as a result of non-coincidence of the peak load moments in the member countries, decrease in the necessary standby power generation capacity which each country must develop, etc(13).

Bulgaria has also achieved considerable success in the field of power engineering since the Second World War. Mastery of techniques of using the



lignite coal of low calorific power in the Maritsa East area, where the reserves of this form of fuel have been estimated at around 3 billion tons, has been of great importance in this connection. Following the commissioning of first generating set of the Purva Kozlomska thermoelectric power plant in 1960, Bulgaria became the first country in the world to begin using lignite coal with a calorific power of 1000 to 1600 kilocalories per kilogram on the basis of a new technology. It had previously been assumed in world practice that the lower limit in coal use was 1600 to 2000 kilocalories per kilogram. In this connection a symposium was held in Bulgaria in 1977 under the auspices of the United Nations; it was attended by specialists from the United States, Canada, Western Europe, India, etc.

The coal industry began to develop at a much faster pace in Bulgaria especially after adoption of the multiplication program in 1977 by the Politburo of the Bulgarian Communist Party Central Committee, as a result of which coal output reached 33.8 million tons in 1983(15). This put little Bulgaria in fifth place in the world in coal production in physical terms per inhabitant, ahead of the countries the most advanced in this respect, such as the United States, Great Britain, the Federal Republic of Germany, France, and others(16). As a result of the increased production of electric energy in thermoelectric power plants and nuclear power plants, the consumption of this form of energy per inhabitant currently amounts to around 5200 kilowatt-hours, which is 3 times higher than the average electric power consumption in the world and approaches the level of the developed European socialist and capitalist countries such as the USSR, Czechoslovakia, France, Holland, etc. A similar comparison may be made from the viewpoint of total energy consumption, which amounts to around 5 tons of conventional fuel per inhabitant.

Bulgaria's achievements in years past in the field of power engineering are qualitative as well as quantitative; 30 percent of electric energy is now produced from nuclear fuel and one-third from locally mined coals. Bulgaria is in first place in the world in percentage of energy derived from solid fuels of low calorific power, and in sixth place in percentage of energy from nuclear power plants(17). Thanks to the persistent efforts of the power engineering personnel of the Kozloduy nuclear power plant, the efficiency of Bulgaria's first nuclear power plant has grown rapidly, and even in 1982 the availability of its capacity reached 7000 hours, putting Bulgaria in first place in this category in Europe(18).

## **2. Power Engineering Development Problems in Socialist Countries**

The economic development of the socialist countries is expected to continue at a steady pace in the years to come, something which will in its turn create the preconditions for expansion of energy consumption. Thus, the total energy consumption in these countries is expected to rise from 3.0 billion tons of conventional fuel in 1980 to 4.0-4.5 by the year 2000. At the same time, the efficient measures applied to the fuel and electric energy economy in all socialists are expected to cause the increase in energy consumption to drop from 4.88 percent over the 1970-1980 period to 2.92 percent from 1980 to 1990 and 1.18 percent from 1990 to 2000(19).

In contrast to the economically developed capitalist and developing countries, where petroleum is expected to continue to be the basic source of

In contrast to the economically developed capitalist and developing countries, where petroleum is expected to continue to be the basic source of energy over the next 2 decades, the basic energy source for the socialist countries will continue to be coal. The share of coal in the fuel and energy budgets of these countries is expected to rise to 36 percent by the year 2000.

The basic directions of energy potential development in the European socialist countries in the coming years aimed at providing their national economic systems with fuels and electric energy are primarily the following: accelerated development of the countries' own energy resources, and especially the coal industry and nuclear power engineering; increasing use of nonconventional energy sources such as solar, geothermal, and wind energy, etc., as well as secondary energy sources based on the latest achievements of scientific and technical progress; application of integrated measures to increase the efficiency of energy consumption and achieve conservation of fuels, energy, and raw materials in all sectors of the national economy; intensification of international cooperation in the area of power engineering within the framework of CEMA and elaboration of long-term specific-purpose programs for development of the energy sectors; and participation along with the other socialist countries in development of new deposits of fuels and raw materials in the territory of the USSR and certain developing countries in accordance with the principle of mutual advantage.

One of the basic problems to be solved by the socialist countries in the coming years is creation of the necessary conditions for accelerated development of coal mining, and especially open pit or strip mining, whereby the bulk of the brown and lignite coal used in thermoelectric power plants is obtained. The output of coal obtained by open pit mining in the CEMA socialist member countries is expected to rise over the 1979-1990 period from 680 to 1110 million tons, this including an increase from 256 to 450 million tons in the USSR, from 256 to 300 in the GDR, from 38 to 140 in Poland, from 82 to 101 in Czechoslovakia, etc.

Rapid development of nuclear power engineering in the years to come is also expected in the European socialist countries belonging to CEMA, as a result of which the total number of nuclear reactors in these countries is expected to rise to 158 by 1991, with a gross capacity of 124,489 milliwatts, this including 99,689 milliwatts (114 reactors in the USSR, 7480 milliwatts (13 reactors) in the GDR, 6280 milliwatts (13 reactors) in Czechoslovakia, 5760 milliwatts (8 reactors) in Bulgaria, 2640 milliwatts (4 reactors) in Romania, 1760 milliwatts (4 reactors) in Hungary, and 880 milliwatts (2 reactors) in Poland. Thus, over the 1985-1991 period 104 reactors with a capacity of 95,380 milliwatts will be built in 7 European socialist countries, as against 79 reactors with a capacity of 87,723 milliwatts in the remaining 19 West European countries(20). In the 1980's a nuclear power plant will also be built in one of the youngest socialist countries belonging to CEMA, Cuba. Cuban specialists are to be trained in Bulgaria, at the Kozloduy nuclear power plant, which is similar in type to the Cuban plant. Bulgarian specialists will also assist Cuba during the first years following commissioning of the first Cuban nuclear power plant near the city of Cienfuegos.

The 113th meeting of the CEMA executive committee was held in Moscow at the beginning of this year. Questions relating to further intensification and development of socialist economic integration in some of the most important sectors, including power engineering, in future years were considered at the meeting. In particular, the concept was approved of long-range development of electric power engineering within the framework of the Unified Energy System of the socialist countries belonging to CEMA by the year 2000. This concept calls for improvement in the structure of electric and thermal energy generation on the basis of priority development of nuclear power engineering and the countries' own energy resources, including fuels of low calorific power, new nonconventional energy sources, and more efficient use of fuels in thermoelectric power plants. The decision was also made to elaborate integrated measures to increase efficiency and reliability in parallel operation of the Mir Unified Energy System.

The fundamental directions of development of the energy potential of the socialist countries in the coming years will unquestionably also characterize Bulgarian power engineering. Indeed, these directions were confirmed back at the beginning of 1983 by an expanded collegium of the Ministry of Power Engineering concerning itself with the problems deriving from the theoretical formulations and practical solutions in the speeches and reports of Comrade Todor Zhivkov after the 20th party congress.

In mapping out the prospects for development of Bulgarian power engineering in the future we must, however, make an objective analysis of and devote attention to problems for which it has not been possible to arrive at a satisfactory solution. Despite the success achieved in the development of this sector, there are still many reserves and untapped potential especially as regards questions of efficiency and quality. As the Minister of Power Engineering, Nikola Todoriev, recently pointed out, "in the current stage the fuel and energy base that has evolved requires a fundamentally new approach, a new attitude toward use of energy. An absolutely essential condition for reaching a qualitatively new level of energy efficiency is increasing application of new advanced technologies, fundamentally new technical and technological solutions, and the latest achievements of Bulgarian and world science and technology, as is required by the resolutions of the February (1985) plenum of the Bulgarian Communist Party Central Committee"(21).

The need for increasing efficiency in power engineering has been acutely felt over the last few years. It was particularly obvious last winter, when delay in construction of new facilities, low reliability of installations following repair, abnormally high consumption of fuel and electric energy, and other factors led to disruption of electric power supply in Bulgaria, with serious repercussions on the normal production process, transportation, and heating of households. The difficulties which arose caused attention to be concentrated on construction of new facilities and repair of electric power plants. To solve the problems encountered, the government issued a special decree and created a powerful organization having the sole aim of ensuring normal operation of the economy and heating of households.



The fifth power generating unit resulting from expansion of the Maritsa East 2 thermoelectric power plant has already been commissioned in the Maritsa East mining and energy economic complex. Intensive work is currently in progress on assembly of the sixth generating unit, and construction of the seventh and eighth units is to begin next year. There is a real danger, however, that the new capacities will be without coal, since coal output in the complex is already 2 to 4 years behind its scheduled development(22). The main reason for this is failure to secure the needed capital investments in time, with the result that abandonment of 92.5 million cubic meters of mine excavation and millions of tons of coal was recorded during the years of the eighth five-year plan alone. Thus, work on the 126th horizon is 27 months behind schedule, that is, 8 million tons of coal have not been mined, and if the lag continues about 6 million tons will be irretrievably lost on the central face line, and nearly 10 million tons in the Troyanovo 3 mine. In addition, it will be necessary to abandon 7 million tons of coal of the highest calorific power between the Troyanovo 1 and Troyanovo 3 mines, the extraction of which is the most economical.

In the last 4 years alone 47.5 million cubic meters of mine excavation and 14 million tons of coal have been abandoned as a result of failure to install production facilities in time at the Troyanovo North mine. This is the mine which supplies the Maritsa East 2 thermoelectric power plant, at which work is continuing on construction of new generating capacity. Among the main reasons mention must be made of the unfulfilled contracts for delivery of mine conveyance equipment, which is manufactured in Bulgaria by a number of enterprises, such as the Vaptsarov machine-building plant in Pleven, the Bistrets machinebuilding plant in Kurdzhali, the Agromashina primary economic association and its prime contractor, the A. Ivanov machinebuilding plant in Plovdiv, etc(23).

To overcome the difficulties which have arisen and increase labor productivity in the coal industry and the efficiency of this industry, it will be necessary to plan and carry out comprehensive measures in the coming years to improve the degree of utilization of basic and conveyance machinery, by designing, manufacturing, or importing mechanized systems suitable for the specific conditions of mines(24); improve the organization of repair activities and expand facilities for repair and production of spare parts; improve the condition of railroad lines and increase their traffic capacity; improve maintenance and servicing of machinery and increase personnel qualifications; improve labor and technological discipline; etc.

Improvement in product quality is of decisive importance in increasing the efficiency of the sector. The quality of coal is determined largely by natural conditions and by the technologies applied in coal mining and processing. Around 91 percent of Bulgarian solid fuel reserves is represented by lignite coal (for the most part of high ash content and low calorific power), 8.5 percent by brown coal, and 0.5 percent by black and anthracite coal, used chiefly for generation of electric energy. Consequently, dependable and efficient operation of the majority of Bulgarian electric power plants depends largely on regular supply of coal, and especially on the quality of the coal. It will accordingly be



necessary in the years to come to carry out a number of measures to prevent the deficiencies of recent years, when 10 to 12 percent of the total amount of coal delivered to thermoelectric power plants had an ash content higher than that provided in the standards(25).

An important part will be played in Bulgaria's energy policy in the coming years by increase in the efficiency and economy of use of energy not just in power engineering, but in all sectors of the national economy. This conclusion is imposed by the fact that, despite the success achieved, the relative energy intensity of the Bulgarian national income(26), which over the 1970-1980 period amounted to 0.66, is considerably higher than that of a number of socialist and developed capitalist countries (GDR 0.36, Romania 0.54, USSR 0.55, United States 0.24, Japan 0.41, and the Federal Republic of Germany 0.59)(27). The same finding is suggested by the consumption of electric energy per unit of national income, an indicator in which Bulgaria is exceeded among the socialist countries belonging to CEMA only by the USSR and Poland(28).

The construction of new facilities which will be commissioned in the coming years will greatly improve conditions for normal electric power supply, especially after 1986. The program in this sector calls for further development of coal output, which is to reach 45.4 million tons by the end of the next five-year plan. The development of Bulgarian nuclear power engineering will also enter a qualitatively new stage. For the first time outside the USSR, a reactor with a unit power of 1000 milliwatts is currently under construction in Bulgaria. It will be able to provide for generation of 6 billion kilowatt-hours of electric energy annually, that is, as much as was generated by all Bulgarian power plants in 1961. Two such reactors are to be commissioned by 1990, and afterward an additional four, at the Belene nuclear power plant. The goal is generation of about 40 percent of electric energy in Bulgaria in nuclear power plants by 1990, and 60 percent by 2000, along with satisfaction of the needs for this form of energy, which are expected to rise to 6600 kilowatt-hours per inhabitant in 1990 and to 8000-9000 in 2000.

Nonconventional, renewable energy sources such as solar, geothermal, and wind energy, etc, will also be going to play a more essential role in Bulgarian power engineering. Bulgaria has favorable natural climatic conditions for their use. Thus, solar radiation intensity (in kilowatt-hours per square meter) in the territory of the CEMA member countries is as follows: Bulgaria 2000, Hungary 1218, Poland 1015, Czechoslovakia 900-1100, GDR 990, USSR 798 (in areas above 68 degrees north latitude), etc(29). In 1983 the New Energy Sources scientific production economic complex installed and commissioned around 5000 square meters of solar collectors in Bulgaria, and around 7000 square meters in 1984.

The results achieved thus far in development of the energy potential of Bulgaria and the measures mapped out to surmount current difficulties and speed up development in the coming years clearly show that in the future this potential will meet the fuel and electric energy needs of the national economy. An additional guarantee is given by the integrated measures for further intensification of cooperation with the other

socialist countries belonging to CEMA, and especially with the USSR, in all areas of the energy complex.

#### FOOTNOTES

1. "Dvanadeseti Kongres na BKP. Dokladi i Resheniya" [The 20th Congress of the Bulgarian Communist Party. Reports and Resolutions], Sofia, 1981, p 21.
2. See RABOTNICHESKO DELO, 9 June 1982.
3. Conventional fuel: 1 kilogram equals 7000 kilocalories.
4. YEARBOOK OF WORLD ENERGY STATISTICS, United Nations, New York, 1950-1980.
5. JAHRBUCH FUER BERGBAU, ENERGIE, MINERALOEL UND CHEMIE, Essen, 1984-1985, p 891.
6. "Energetika. Toplivo. Dostizheniya i Perspektivy" [Power Engineering. Fuel. Achievements and Prospects], Moscow, 1977.
7. JAHRBUCH FUER BERGBAU, ENERGIE, MINERALOEL UND CHEMIE, Essen, 1984-1985, p 918.
8. Ibid., p 919.
9. "Energetika. Toplivo. Dostizheniya i Perspektivy," Moscow, 1977, p 68.
10. For a more detailed discussion of this question, see the article by the author, "Zadulbochavaneto na Sutrudnichastovoto mashdu Stranite ot SIV v Atomnata Energetika" [Intensification of Cooperation among the CEMA Countries in Nuclear Power Engineering], PLANOVO STOPANSTVO, No 7, 1984.
11. ATOMWIRTSCHAFT-ATOMTECHNIK, No 6, 1983, p 314.
12. JAHRBUCH FUER BERGBAU, ENERGIE, MINERALOEL UND CHEMIE, Essen, 1984-1985, p 936.
13. For a more detailed discussion of this question, see "Mazhdunarodnata Turgoviya s Elektroenergiya" [International Trade in Electric Energy], IKONOMICHESKA MISUL, No 3, 1984.
14. BIKI, 25 January 1983.
15. The amount of coal mined in Bulgaria in 1944 was 3 million tons.
16. See VUGLISHTA, Appendix to No 1, 1983, p 3.
17. ATOMINFORMATIONEN, March 1983.
18. See RABOTNICHESKO DELO, 30 January 1981.

19. GLUECKAUF, NO 14, 1982, P 739.
20. ATOMWIRTSCHAFT-ATOMTECHNIK, No 6, 1984, p 298.
21. N. Todoriev, "Klyuchut za intenzifikatsiya na energetikata" [The Key to Intensification of Power Engineering], POLITICHESKA AGITATSIYA, No 10, 1985, pp 7-8.
22. The Maritsa East mines are extremely important for development of Bulgarian coal mining. In 1983, 65.1 percent of Bulgarian coal was mined in them, and stripping reached 105.2 million cubic meters, i.e., 85.3 percent of the amount in all strip mines.
23. See RABOTNICHESKO DELO, 7 June 1985.
24. Over the 1975-1983 period, the average annual output per complex declined from 456 to 337 tons (see VUGLISHTA, No 4-5, p 5).
25. See VUGLISHTA, No 4-5, pp 8-9.
26. The coefficient is calculated by comparing the average annual rate of growth of energy consumption with the average annual rate of growth of the national income.
27. See IKONOMICHESKA MISUL, No 6, 1984, p 58.
28. "Toplivno-syrevaia Problema v Usloviyakh Sotsialisticheskoy integratsii" [The Problem of Fuels and Raw Materials under Conditions of Socialist Integration], Moscow, 1979, p 6.
29. "Problemy Razvitiya Toplivno-energeticheskogo Kompleksa Stran-Chlenov SEV v Usloviyakh Sotsialisticheskoy Ekonomicheskoy Integratsii" [Problems in Development of the Fuel and Energy Complex of CEMA Member Countries under Conditions of Socialist Economic Integration], Moscow, 1982, p 110.

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ALBANIA

SHORTFALLS IN PLAN FULFILLMENT IN MINES, OTHER AREAS

Tirana ZERI 1 POPULLIT in Albanian 17 Aug 85 p 1

[Article: "The Tasks Which Emerged From the Meetings for Rendering Accounts and Holding Elections Require Continual Pursuit"]

[Text] A month and a half has passed since the party election campaigns ended. The party organs and organizations have drawn up the balance sheet and have reached the designated conclusions regarding the phenomena which manifested themselves during the two-month period of election campaigns in May and June. The issue is that the problems which emerged during the campaign and the decisions which were made at meetings to render accounts and hold elections in the basic organizations, in the general meetings of communists or in the party conferences must be carefully, continually and skillfully pursued. This is essential, since—as was stressed at the 12th Plenum of the party Central Committee—when the requisite political, organizational, technical and material measures which guarantee qualitative and timely fulfillment of tasks are taken to execute decisions, very good results are achieved.

The basic party organizations, bureaus and committees in enterprises, agricultural units and regions now have in hand the decisions which they have made and the tasks which they have detailed. But the party organs and organizations also have in hand the tasks that resulted from the 12th Plenum of the party Central Committee, which have a very broad spectrum and embrace large problems of work and production, planning and plan fulfillment, advanced experience, savings, etc., etc. They concern every collective, whatever work is done and production accomplished, where teaching is done and scientific research is developed. It is necessary to view the decisions of the meetings for rendering account from the standpoint of tasks assigned by the last plenum of the Central Committee, in order that every task should bear the stamp of time and the concern of the day, as an urgent need responded to by the present and clear perspective at the level of the brigade, the enterprise and up to the level of special sectors of the economy.

When we speak about problems and tasks which arise from the meetings for rendering accounts and holding elections in the party and their actualization in terms of present tasks, we are not speaking about secondary matters, about some requirement or observation with respect to this or that problem. The major concerns are those which are placed at the center of the work of the

basic organizations and the communists, those which determine the content of the work of party organizations. Many basic organizations in the oil sectors correctly manage problems such as these: what is advanced experience and why is it often confined to a few brigades and sectors instead of being widespread everywhere? Why does the training of people not respond, in many cases, to advanced levels? Why does the technical spirit continue to predominate sometimes in the analyses of basic organizations? Even more important, what is the political conception of tasks of the communists and of every oil worker? Problems such as these do not pertain only to the oil sectors. The question is raised for thorough analysis, in order to discover the "why" of matters in the basic organizations, which makes it possible to penetrate to the core of problems.

The seriousness in making decisions and pursuing them is a feature which permeates the life of the party organizations. The manifestations which weaken this phenomenon and, as a result, also weaken the strength of basic organizations to fulfill tasks assigned and decisions made must be placed on the anvil of criticism everywhere. Manifestations of reconciliation on the part of basic organizations to tendencies of administration offices to justify nonfulfillment, and to the "readiness" to enumerate reasons and objective factors of obstruction, while not seeing their own faults in the first place, places in doubt the timely fulfillment of tasks and pledges that have been made. Facts contrary to these attitudes are very significant. The chemical enterprise of Tirana emerged from backwardness precisely because it utilized, with high effectiveness, its internal sources and existing possibilities. The "Steel of the Party" metallurgical combine has recently increased its level of task fulfillment further, despite all the difficulties and shortcomings, because all possibilities are being utilized—first and foremost, people's drive and the technical thought of specialists. If a cast iron plant, a brick firing combine, etc., overfulfills the tasks of the plan on a daily basis, with the planned material base, this is the result of political comprehension of tasks and the expression of people's readiness and the executing strength of the basic party organizations.

In recent years, the basic organizations which manage the sectors of animal husbandry have been enlarged. This has yielded positive results in practice. But non-fulfillments in milk production in some districts, such as Korca, Durres, Shkoder and some others, the high cost of producing meat in some agricultural complexes, etc., also indicate a defect in the work of party organizations and inadmissible attitudes toward advanced experience. Despite the improvements, it is not right that in the Valias mine, the overfulfillments of some groups continue to "eat" the others by means of unjustified deficits which they create. It is not right that the deficits of thousands of tons of chrome at the beginning of the month in the mines of Bate and Bulqize should be concealed by the second two-week period of "assault" work when there is no objective reason for this aside from laxness in organization and a lack of proper pursuit of these problems by the party organizations themselves. This must be reflected on thoroughly and fully everywhere, because the communists work and struggle and the basic party organizations administer and control everywhere.

BULGARIA

REPORT ON EAST-WEST ECONOMIC FORUM HELD IN VARNA

Opening Session

Sofia RABOTNICHESKO DELO in Bulgarian 29 Sep 85 pp 1,6

[Article: "Mutual Interest in Expansion of Cooperation—Second Varna Meeting of East-West Business Circles Opened—Comrade Todor Zhivkov's Address"; Zhivkov speech delivered at forum was published in FBIS/EE/DR of 3 Oct 85]

[Text] Varna—28 Sep (BTA). "We are ready to suggest with pleasure that Varna become a traditional center of meetings of East-West business circles in the interest of world peace and in the interest of mankind's prosperity," declared Comrade Todor Zhivkov at the first Varna meeting in 1982.

Starting today, Varna is host to the second meeting on the topic "East-West Trade—Status and Prospects." Participating in it there are nearly 200 eminent representatives of business circles from 21 European countries, Canada, the United States and Japan, as well as from five prestigious international organizations.

The success of the first meeting has attracted now nearly three times as many participants. Deputy ministers, heads of state, economic and scientific and technical organizations and associations of European socialist countries have come. Here there are leading representatives of such world-famous firms as Krupp, Siemens, BASF [Badische Anilin- & Soda-Fabrik], Daimler-Benz, Hocht, Thyssen, Technipetrol, ENI [Ente Nazionale Idrocarburi], Fiat, Montedison, Toshiba, Kobe Steel, Philips, ASEA [Allmänna Svenska Elektriska Aktiebolaget], Cadbury-Schweppes, Rank Xerox, Honeywell, Coca Cola, PepsiCo. Also represented are great credit and financial institutions—Creditanstalt-Bankverein, Crédit Lyonnais, Banca Commerciale Italiana, Banco di Roma, Lloyds Bank.

Participants in the meeting greeted Chairman of the State Council Todor Zhivkov with long applause.

Varna Forum II was opened by the deputy chairman of the International Council for New Initiatives in East West Cooperation, Donald Kendall, chairman of PepsiCo Inc, who gave the floor to Chairman of the State Council Todor Zhivkov

Comrade Todor Zhivkov delivered an address. (We publish the address separately.)



All present listened to the Bulgarian leader's address with marked interest and received it with long applause--an expression of the esteem for Comrade Zhivkov's consistent statesmanship on behalf of peace and understanding in the Balkans, in Europe and in the world.

The first plenary session was presided over by Minister of Foreign Trade Khristo Khristov. He reviewed the general and the commercial-and-political approaches to East-West reciprocal trade. New directions for the future development of trade were also taken up in line with objective trade possibilities.

Donald Kendall (United States) pointed out that this meeting was organized at an important time when the international situation was not good. Expressing his optimism over the future prospects of development of East-West relations, he went on to declare that well-founded hopes rest on the impending meeting and talks between Mikhail Gorbachev and Ronald Reagan regarding an expansion of opportunities for mutually advantageous cooperation between the United States and the USSR. Donald Kendall surveyed the characteristic features of trade between the United States and the Soviet Union and other countries of the socialist community and set forth his views and suggestions for the activation of trade and economic relations.

Chairman of the Presidium of the USSR All-Union Chamber of Commerce and Industry Yevgeniy Pitovranov pointed out that the participation in the meeting and the very interesting address by the leader of the Bulgarian People's Republic, Todor Zhivkov, imparted special significance to this forum. The wider representative character of Varna Forum II indicates the personal interest of business circles in the expansion of East-West trade cooperation.

"The fact that we frankly and freely exchange opinions is proof of our desire to expand cooperation. The endeavor of business circles to eliminate existing obstacles could comparatively speedily yield the results we desire," emphasized the Soviet representative and expressed confidence that the meeting would be useful.

An analysis of the past and present state of East-West trade, of its growth rate and trends was made at the afternoon plenary session, presided over by Jean Deflassieux, president of Crédit Lyonnais.

The participants gave a thoroughgoing estimate of the achieved level and the potential opportunities for mutually advantageous trade.

First to take the floor was the executive secretary of the UN Economic Commission for Europe, Klaus Sahlgren, who extended cordial greetings to the organizers of this forum with great significance for the future of international business contacts. He indicated the necessity of turning the expanding East-West economic cooperation to advantage in order to solve certain problems such as growing unemployment, manifestations of protectionism, etc. East-West trade holds great potential opportunities for progress, the speaker emphasized.

The State Secretary of the GDR Ministry of Science and Technology Klaus Stubenrauch declared that the economic relations between business circles in the

socialist and capitalist countries have not exhausted their possibilities. Recently, favorable political and economic conditions have flowered for the activation, expansion and enrichment of mutually advantageous economic cooperation. Irrespective of the embargo and the credit restrictions imposed by certain circles in the West, he assured that the GDR would hold to its course of an expansion of trade relations with the West.

Karl-Hermann Finck, FRG general secretary of the East-West Trade Committee, spoke in the forum. On behalf of the chairman of the committee, Otto Wolf von Amerongen, he conveyed wishes for successful and effective proceedings of the Varna meeting. Karl-Hermann Finck observed that with the signing of the Final Document at Helsinki political and economic relations in the world received a new impetus. An understanding was reached that was a basic element for the development of economic cooperation. The Varna Conference is a great event, organized with the know-how of the Bulgarian government and the assistance of the Vienna Council for New East-West Initiatives.

One-third of the trade of the countries of the socialist community is carried on with Western countries, observed Ladislav Kubicek, first deputy chairman of the State Commission for Scientific, Technical and Investment Development of the Czechoslovak Socialist Republic. He observed that this trade exchange bears significant advantages for the West and for the East. Economic cooperation is the material foundation for the peaceful coexistence of countries with a different social system. The speaker expressed gratitude to the Bulgarian hosts for the excellent conditions for fruitful work.

Lutz Mann, FRG firm director, expressed the hopes of business circles in the Federal Republic that the conversations between Mikhail Gorbachev and Ronald Reagan would contribute to a better future and to stabilization of East-West economic relations. He observed that during this decade there has been an 8-percent average annual growth of FRG trade with the socialist countries with advantages for all partners. Economic relations are an inseparable part of East-West relations and are a stabilizing factor for understanding and cooperation on the continent and in the world.

The head of the U.S. Apple Computer Company, John Sculley, spoke about the dynamic computerization of modern life. Proceeding from this premise, his firm seeks useful business contacts with the countries of Eastern Europe as well. The restrictions imposed by the U.S. Government on the export of technologies impedes his firm's business. John Sculley expressed his conviction that it is precisely technologies and innovations that are the bridge for the maintenance of sounder East-West ties, for the raising of confidence and for the opening up of new spheres of cooperation.

Jean-Louis Domenge, general director of Interagra, dwelt on France's traditional economic relations and trade with the socialist countries. It is trade that is the sphere where we can come to an understanding, the speaker indicated. In the recently maturing trends towards better East-West mutual understanding, France intends to make its contribution and enlist actively in this process. In the present as in the past there is no way to the future without mutually advantageous economic and trade partnership between the socialist and the Western countries.

According to the head of the Yugoslav General Export Firm, Milorad Savičević could not expand East-West relations without intensifying the contacts with the developing countries.

The chairman of the East European Trade Council in Great Britain, Lord Shackleton, said that at this forum a number of firms from his country are represented that maintain trade and business relations with Bulgarian organizations. He assured that the desire of British business circles and public opinion is that political and other relations with the Soviet Union and the other socialist countries should improve. Speaking of certain new pioneer technologies whereby we can expand mutual cooperation, Lord Shackleton extended wishes for the undertaking of effective measures to expand East-West partnership. He stated his conviction that the Varna meeting was a large step in this direction.

Therewith the proceedings of the afternoon plenary session concluded.

Tomorrow the forum will continue with sessions in three working groups.

#### Second Day

Sofia RABOTNICHESKO DELO in Bulgarian 30 Sep 85 p 2

[Article by Special BTA Correspondent Sergey Nakov and BTA Correspondent Leon Adzheman: "Potential Opportunities for Mutually Advantageous Cooperation"]

[Text] Varna--29 Sep. The Second International Meeting Devoted to the Status and Prospects of East-West Trade concluded today. The sessions took place in three working groups.

The proceedings in the first group, headed up by Asen Zlatanov, division chief in the Ministry of Foreign Affairs, covered questions of joint enterprises as a means for the development and expansion of East-West reciprocal trade on a long-term basis.

In his statement Kurt Neubauer, deputy chairman of the Eastern Europe International Trade Committee (FRG), emphasized that mixed enterprises open up additional opportunities for goods exchange. He pointed out that a state of balance must be effected between imports and exports and the interests of the partners must be respected. The speaker dwelt also on certain obstacles which prevent making use of the potential opportunities of industrial cooperation.

The president of the firm APV Holdings (Great Britain), Roland Macintosh, spoke about the useful contacts of his firm in setting up joint enterprises in socialist countries, and more especially in Bulgaria. According to Roland Macintosh, experience so far has confirmed that cooperation in this area, when based on confidence, enjoys successful development.

The speech of the president of Honeywell Corporation (United States), Bjorn Bjornstad, was received with interest. The corporation is developing activity throughout the world and maintains business contacts with Bulgarian firms. Honeywell Corporation manufactures electronic equipment and program systems. The



management of the corporation is especially pleased with the activity of the Bulgarian-American mixed enterprises, in which the Bulgarians demonstrate high professionalism and businesslike qualities and give an example of effective forms of East-West trade.

For his part, the chairman of the Bulgarian-American Joint Company "Systematics," Lyudmil Golemanov, declared that in Bulgaria already more than 20 program systems have been developed which are employed for administrative and control processes in the oil-refining, paper, rubber and other industries. Computers of the Honeywell firm of Bulgaria and Hungary are used for the purpose. The participation of our specialists in setting up a program system for the British Petroleum refinery in Scotland and in equipping the petrochemical combine at Baroda (India) is recognition of Bulgarian progress in this area.

Hans Buscher, a Siemens director, after pointing out the firm's longstanding and upward-trending business contacts in industrial subcontracting with some socialist countries, indicated that conditions are now present for a new impetus to the creation of mixed enterprises. Along these lines economic relations between East and West hold great potential opportunities.

The chairman of Tokyo Mariuchi Shoji (Japan), Shoichi Kunimaru, declared that cooperation with Bulgaria traces back to 1962 and it was the first socialist country with which his firm established and developed very successful business contacts. The joint Sofia-Mitsukushi Enterprise has attracted another 11 Bulgarian enterprises into Bulgarian-Japanese industrial cooperation. Food products and other goods exported to socialist countries are produced. The reciprocal advantage from the 3-year activity of the mixed Bulgaro-Japanese enterprise is continuously growing.

Last to speak was Ferenc Varta, Hungarian deputy minister of foreign trade. He stressed the problems in making available to mixed enterprises the latest technologies as an important precondition for successful economic activity. For the forms of economic cooperation in this sphere to become more abundant, the repayment of credits must be made in output outstanding in quality criteria and in market value. He stressed that when conditions exist for the respecting of their reciprocal interests, the socialist countries offer legislative, financial and economic facilities for the joint organization of East-West production activity.

The working group dealing with certain aspects of East-West trade financing made their platform available to representatives of financial and credit institutions. Their views were set forth by Jean Deflassieux, director of Crédit Lyonnais (France), Sandor Dencaak, chairman of the Hungarian Foreign Trade Bank, Peter Emerson, head of Lloyds Bank (Great Britain), Carlo Bofito of Banca Commerciale Italiana, Antoni Sala of the Warsaw Commercial Bank, and Zdenek Boska of the Czechoslovak State Bank.

In summarizing the speeches, the session chairman, Hannes Androsch, executive of Creditanstalt-Bankverein, stressed that favorable prospects exist for the strengthening of East-West economic relations.

Among the speakers in the study group on the provision of technologies for the diversification of reciprocally advantageous trade were N. Berdennikov, deputy director of the Soviet Union's State Committee on Science and Technology, Umberto Rosa—"Fiat" (Italy), Adrian Cadbury, president of the Cadbury-Schweppes Company (Great Britain), Ivan (Andzhelis) of the State Committee for Scientific, Technical and Investment Development of the Czechoslovak Socialist Republic, and Thomas (Lil), director of the Vienna Information Systems Institute.

In the discussion of these problems the necessity was pointed out of the Western countries eliminating restrictive measures in making available and exchanging technologies, which under the conditions of the dynamic development of scientific and technical progress has assumed paramount importance for the further expansion of East-West reciprocally advantageous economic and trade cooperation.

The final session was presided over by Deputy Chairman of the Council of Ministers Andrey Lukanov.

In his speech the chairman of the Polish Chamber of Commerce Ryszard Karski pointed out that his country has overcome the trends towards an economic decline. The assistance rendered by the Soviet Union and by other CEMA-member countries was of tremendous importance for this happening. He also indicated that for further normalization of Poland's economic relations with the Western countries, financial and credit conditions have to be normalized. This would also assist Poland's effort to improve the competitiveness of its economy.

Hannes Androsch, president of Creditanstalt-Bankverein, dwelt on certain questions involving the interaction between trade and credit-and-financial activity. Presenting some of the conclusions arrived at by one of the working groups in the morning's session, he pointed out that bankers need better information creating confidence and expanding the opportunities for commercial transactions. He expressed the conviction that the representatives of East-West business circles must contribute to the bringing about of better relations between countries.

The participants in the Varna Forum II unanimously approved the final document, which contains the basic conclusions of the 2-day discussion. The East-West business circles represented at Varna are convinced, the document states, that East-West trade and economic relations are destined to play a very great role in the bringing about of mutually advantageous cooperation between the socialist and the developed capitalist countries.

The document rates highly the participation of Chairman of the State Council Todor Zhivkov in the forum, as well as the address he delivered. Support is also expressed for the proposals made by the Bulgarian state leader regarding the creation of the necessary institutions at various levels which will foster the development of East-West trade and economic relations.

The participants confirmed once more the importance of regular meetings between the executives of business circles and official governmental representatives of the East and West in order to expand cooperation on the basis of mutual advantage and understanding. It was also emphasized that in the present

international situation, East-West trade is of growing significance and must continue to develop.

In closing the forum, Deputy Chairman of the Council of Ministers Andrew Lukanov stressed that it had taken place in an atmosphere of good will, in the clearly expressed desire to strengthen the spirit of confidence and to take the next steps for fruitful cooperation. He emphasized also that the discussions have contributed to better understanding of existing problems.

The participants in the meeting agreed that the Third Varna Forum should take place in 1987. This, as well as the success of the previous two forums, gives reason to say that Varna has gained recognition as a center for meetings and contacts between East-West business circles.

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BULGARIA

**APPLICATION OF SCIENTIFIC ACHIEVEMENTS URGED**

Sofia RABOTNICHESKO DELO in Bulgarian 30 Sep 85 p 1

[Editorial: "Scientific and Technical Revolution the Basis for our Development!"]

[Text] The scientific and technical revolution is stepping up its pace and taking over more and more new areas of life. Its wonders are manifested no longer in laboratories, institutes and enterprises, but have become the everyday concomitant of contemporary man and have profoundly pervaded his way of life, education and sphere of services. Therefore, the achievements of the scientific and technical revolution have an increasingly deeper impact and more and more forcefully affect the socio-economic processes that are taking place in the world. But whereas in the capitalist states these achievements cast more and more new workers out into the streets, give rise to unemployment and serious social conflicts and incite and sharply exacerbate the economic crisis, in our country the scientific and technical revolution is the main means and the basis on which we must continue to construct a mature socialist society and ensure fulfillment of party plans for elevation of the people's well-being and all-round development of the socialist person. "Under present conditions," Comrade Todor Zhivkov pointed out at the February Plenum of the BCP Central Committee, "carrying out the scientific and technical revolution means building a developed socialist society. And, vice versa, building socialism in our country means carrying out the scientific and technical revolution."

In keeping with the laws of nature discovered at the present stage of our development, the BCP Central Committee adopted resolutions at the February Plenum regarding a fundamentally new attitude and approach towards scientific and technical policy in our country. With utmost clarity it was pointed out to the plenum that the unfolding of all laws of nature bearing on modern social progress in favor of socialism depends in maximum degree on the influence of the scientific and technical revolution.

Enough time has elapsed since this historic party forum for its basic thrusts and requirements to be interpreted and for the means of implementing its

decisions to be outlined. Work is already under way on the practical approaches for solution of the problems with which the scientific and technical revolution confronts us and for introduction in practice of the concrete results of that revolution. But it must at once be emphasized that the pace and scale of the reorganization are far from measuring up to the problems or to the real potentialities of the country, key personnel, resources and material and technical base. Many sectors and economic and scientific organizations expect to work on partial problems and tasks and do not undertake overall and effective operations.

First, the task set now is fundamentally to reorganize planning, the approach in its compilation as in its essence being to incorporate balances worked out on the basis of scientific and technical progress. Unfortunately this requirement was not met in the formulation of plans for next year or for the Ninth 5-Year Plan. Planning bodies obviously did not delve deeply into the essence of the requirements of the February Plenum, which obligated them to change in their thinking and actions. It must not be forgotten that in only a few months the 13th BCP Congress will approve the strategy of our future development and this strategy cannot be built on an old unstable foundation. Only on the basis of modern scientific and technical progress can the genuine and scientifically bounded planning that is needed be provided.

In its essence the modern scientific and technological revolution is a technological revolution. Therefore the problem of technologies is now becoming the key problem for our development and it is no accident that there is talk of a technology race, and even of a technology battle, between individual countries or even between the two basic socioeconomic systems. Consequently, the problem of development and introduction into operation of new technologies is of paramount significance.

When we talk of the explosive development of technologies in the modern world, we mean that they are already breaking up the framework of the separate sectors and are losing their unique, specialized character. Observable in modern technologies are repetitive and uniform scientific and technical solutions; there are common characteristics in their makeup. This makes them more adaptive and gives the opportunity to search for speedy effect in a number of reciprocally related sectors and production processes. What is more, the rate of development of the modern scientific and technical revolution can be significantly accelerated through the application of technological modules to create new technologies and thus create a multiplicative effect from them.

In our country we have some important achievements in the creation of highly efficient methods of production processing. Let us mention again the method of pressure casting, centrifugal casting, powder metallurgy, hydroplastic metal processing, etc. May we say, however, that these have overstepped the limits of individual enterprises, not to mention sectors? Their wide application still remains within the limits of good wishes, yet is like a testing ground. At the same time entire sectors and economic organizations are working according to old methods. New technologies do not hold the high share that is required to obtain a severalfold rise in labor productivity, world-standard quality and large-scale economic efficiency. The questions arise no longer

for individual combines only, but as a policy and overall decision in the economic ministries and scientific organizations themselves.

Nor are modern methods being employed in plastics processing. This reduces several fold the efficiency of their use in the national economy. The opportunities are great also for so-called corpuscular-photon technologies. These are typical pioneer technologies that can be used not only in machine building and metallurgy, but also in agriculture, the food industry, medicine and in space explorations. Moreover, they meet one important modern requirement--the concentration of the efforts of highly skilled specialists and scientists of various bents. And according to the predictions of world trends of development in the near future it is science-intensive technologies that will provide about two-thirds of the national product in industrially developed states. This means that production will increasingly be saturated with embodied scientific labor.

Already developed in our country are many highly efficient technologies awaiting their application, dissemination and multiplication. Therefore, special organizations must be set up for the transfer of technologies, a task which present scientific industrial trusts cannot perform successfully. The first harbinger has appeared--the "Icar" [Icarus] agency for technology transfer to the trade association, but its function first and foremost is to disseminate new technology created in higher educational institutions. This obviously is not enough and shortly a start must be made on building solid technology transfer organizations, something which will stimulate not only scientific trail-blazing, but also production. In this activity all scientific organizations have an important role, beginning with the Bulgarian Academy of Sciences and extending to the smallest scientific team--the bases of research and development.

The modern scientific and technical revolution is radically changing personnel qualification requirements. The alteration in the character of labor sets new exceptionally high criteria, which not only specialists, but also performing personnel must satisfy. As we know, in our country we cannot boast of serious success in this regard. Considering that training is a long process and that it is most difficult to mold personnel, the solution of this problem must be tackled on a large scale without delay, lest we fall behind the headlong pace of the scientific and technical revolution. The specialist and the worker of the future are being trained today. Unless we do this well today, tomorrow will be too late. Therefore a clear strategy must be formulated for the training of specialists and performing personnel that will meet the scientific and technical revolution. Of special importance in the accomplishment of this task are the provision and training of teachers who can conduct the instruction at a high scientific level.

Solution of the whole complex of problems set by the February Plenum will make possible a sharp rise in the output of quality, and improve its functionality and reliability. Everybody who takes part in the production process must understand that raising the quality of finished output is one of the surest ways of quantitatively satisfying needs. Very often just one insufficiently reliable subassembly reduces a costly machine to a heap of scrap iron. This applies with full force also to durable household goods.



That is why designs, materials and technologies must be introduced into production that will guarantee high output quality. The "monotonous flow" method in the production process has not yet been nipped, for which reason the country in suffers great losses. And this is happening in plain sight of entire workforces, of their managements, of the economic trusts and ministries themselves. What is needed is implacable actions, strict control, businesslike style. Everybody must realize that the social development, as well as the solution of the country's basic problems depends on his work and contribution.

The task of turning to comprehensive account the achievements of the modern scientific and technical revolution and of developing science and technology further in our country is a party task. It is inseparable from the task of the further building of developed socialism in our country. What is more, it is the key, the means for the fulfillment of the Program of the Bulgarian Communist Party. Therefore party leaderships at all levels, party organizations, every communist must exert every effort so that the problems of technical progress become the foundation on which all other tasks are accomplished. It must be understood that in the future the sources of resources, of income for the workforce and hence the residual amount of wages and of social gains will depend mainly on the level of scientific and technical progress and on the quality and efficiency of innovations in production and management. This means that the workforce must change from an object to a subject of scientific and technical progress.

The immediate task now set for the economic organizations is to construct plans for next year and for the entire Ninth 5-Year Plan on a qualitatively new basis. They must be based on scientific research, achievements and forecasts and be aimed at peak gains of the scientific and technical revolution. Delegates to the 13th BCP Congress must appear at the highest party forum with detailed reports on the fulfillment of this task and with clear concrete future work programs of the workforces that sent them.

The congress's decisions must be preceded by deeds of scientists, specialists and all workers. Party organizations for their part must strengthen and develop the activity of the key nuclei in their workforces. Only thus can the party best be fulfilled: a developed socialist society in the Bulgarian People's Republic build on a foundation of scientific and technical revolution.

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BULGARIA

DETERIORATION OF NATIONAL ECONOMY EXAMINED

Paris LE MONDE in French 22 Oct 85 p 5

[Article by Waltraud Baryl: "An Economy Losing Speed"]

[Text] Bulgaria, one of CEMA's least developed countries and the poorest one in terms of raw materials, but which, the past few years, has proven to have a surprisingly healthy economy, must now confront some distressing economic difficulties. Last winter's exceptional cold and the drought which has persisted in the Balkans for 3 years are the primary reasons cited by the government in Sofia to justify the poor economic results expected for 1985. The growth rate will not hit the stated goal of 4.1 percent (4.6 percent in 1984) and an alarming sign is that the country, which until now has been an exporter of agricultural products, will probably have to import some this year in order to supply the population.

Without neglecting the weather factors, the current difficulties can be explained to a large extent by failures in economic management and by the too-cautious implementation of an economic reform which has been applied in stages since 1979.

The newspaper of the Bulgarian Communist Party, RABOTNITCHESKO DELO, on two occasions recently criticized party and state officials severely. It described them as having "a working style and methods lagging behind reality" and lacking in initiative. At the same time, the party daily denounced an excess of "liberalism" in the party ranks and criticized officials for hiding unpleasant realities by presenting overly flattering reports.

The party paper, citing specific cases of corruption--a party secretary in Sofia accepted bribes for "helping" with the purchase of apartments, a vice-president of an agribusiness firm diverted construction materials for his own house, the former president of Bulgarian soccer was sentenced to a prison term for diverting hard currency--has proved to be particularly sharp in its criticism of executives, whose "irreproachable conduct should serve as an example." The same paper had censured the poor work discipline of Bulgarian laborers, which causes firms to lose 2 to 3 hours of work per day.

Last summer a tirade by the Soviet ambassador to Sofia, Leonid Grekov, criticizing economic performance and work methods in Bulgaria (LE MONDE 15 August) came as a surprise because, for historic reasons, Bulgaria is the most faithful ally of the Soviet Union of all the Communist countries in Eastern Europe. In an interview in the weekly POGLED, the ambassador had an unfavorable opinion of the quality of Bulgarian products and commented on the country's outdated industrial equipment, "which operates at only 10 to 15 percent of capacity."

The Soviet diplomat undoubtedly put his finger on the crux of the problem. Inadequate organization and poor upkeep of electric power plants, which have outdated equipment, have certainly aggravated the energy shortage. The power cuts begun in Bulgaria this past winter for an indefinite period of time and which, depending on the area, last for as long as 12 hours per day, have had dire consequences for industry, which consumes over half of the electrical energy produced in the country, not to mention the effects on the daily life of the population.

#### Few Debts

Bulgaria can no longer, as it did in the past, cover all of its needs for petroleum through the USSR at a good price and was obliged to sign an agreement with Iran to deliver 1.2 million tons of crude in 1985. In Dobruja, in the northeast section of the country, there are sizable deposits of coal, but in order to exploit this Sofia must use not only foreign technology (primarily American) but also Western credits. At the present time the country produces 60 percent of its electricity with coal and 30 percent at the Kozloduy nuclear power plant; 10 percent is hydroelectricity.

With \$1.4 billion in debt to Western countries Bulgaria has the least debt of the CEMA countries and would have hardly any problems finding foreign credit to modernize its industry. Quite recently a group of banks granted Sofia \$200 million in credit. But everything leads one to believe that the political leaders will not drop the caution that they have shown in this respect the past few years.

Of all the CEMA countries, Bulgaria has been the only one since the last war to implement a serious industrialization program without neglecting its old and strong agricultural tradition. Until now Bulgarian agriculture, along with Hungary's, has been the only one in Eastern Europe able to meet not only the needs of its population but also able to export sizable quantities of fruits and vegetables. It has undergone profound changes: the rural population is now over one-quarter of the active population (compared to 80 percent in 1939) and its share of national income is less than 20 percent.

A catastrophic harvest—the second one after 1983's (a decline of 7.2 percent in production)—seems, however, to be on the horizon for this year. In addition to the drought, which has paralyzed a large portion of the irrigation systems, there has been a definite deterioration in the soil because of massive use of chemical fertilizer and pesticides and deficiencies in technical equipment.



A sizable private agricultural sector, which, on about 10 percent of the arable land, produces 34 percent of animal products (40 percent of meat, 55 percent of eggs) and 16 percent of plant products (37 percent of fruits, 33 percent of vegetables and 22 percent of fodder) has saved Bulgaria from the types of shortages known in Romania. About 1 million individuals in rural areas and 500,000 city dwellers cultivate individual plots, which vary from .2 to .5 hectares. Private initiative is also allowed in the area of tourism; individuals manage small hotels and restaurants.

#### Partial Reform

Since 1979, Bulgaria has undertaken a slow reform of its economy by introducing the so-called "new economic mechanism" (NEM), first in agriculture, then in industry. Beginning this year, the NEM is being applied in all economic sectors. This "new mechanism" is supposed to guarantee greater flexibility in the system without, however, changing central planning or direct state control of wages, prices, investments or foreign trade. And that is where the shoe pinches. Because there is still an inevitable massive state interference in the management of businesses, the introduction of the "counterplan," drawn up by the latter, leaves a little room for creativity and initiative of employees, but it will undoubtedly be too limited to give new impetus to the national economy.

As part of the NEM a series of price hikes--the most recent this past 15 September caused an increase of from 13 to 40 percent for some food products--was designed to reduce state subsidies. The energy shortage, on the other hand, has caused a stiff increase in the price of gasoline (35 percent) and electricity (41 percent).

Six years after it began, the NEM has some serious inconsistencies. A partial reform, it is far from bringing major changes to the central planning system, as was the case in Hungary. Economically, Bulgaria seems to have joined the downward slide along with the other Eastern European countries.

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CZECHOSLOVAKIA

PRAGUE REPORTS MEETING OF SLOVAK NATIONAL COUNCIL

LD242340 Prague Domestic Service in Czech and Slovak 1100 GMT 24 Oct 85

[Text] The Slovak National Council is discussing at its 18th meeting in Bratislava today fulfillment of the program declaration of the government of the Slovak Socialist Republic. Ladislav Mikus reports on the progress of the morning session:

The deliberations were opened and are chaired by Viliam Salgovic, chairman of the Slovak National Council. Taking part are CPCZ Central Committee Presidium members: Jozef Lenart, first secretary of the CPCZ Central Committee; Peter Colotka, Slovak premier; Presidium and Secretariat members of the CPCZ Central Committee, representatives of other political parties and social organizations of the national front, and other guests, who also include Antonia Slavicek, Presidium member of the Czech National Council.

The report on the fulfillment of the program declaration of the government of the Slovak Socialist Republic was delivered by Slovak Premier Peter Colotka. He said that the demanding tasks, set by the 7th Five Year Plan, are being altogether fulfilled, and the creation of the national income will have increased for the past 5 years by 14.4 percent, which is by 2 percent more than envisaged by the plan. Faster dynamism, in comparison with the plan, will be achieved both by industrial production--it will increase by approximately 20 percent, as well as agricultural production--which will rise, in comparison with the previous 5-year period, by 11 percent. Higher creation of resources will make it possible not only to achieve, but also overfulfill, the aims of personal and social consumption of the population. The planned volume of investment work will also be overfulfilled, although overfulfillment of volume tasks does not always correspond to its actual or society-wide contribution.

He went on to talk about the individual branches of the national economy. He stressed higher valuation of power and raw materials. The growth of labor productivity will rise, in comparison with the departure point, by 26 percent. However, he pointed out that, despite these successes, in comparison with advanced industrial countries, materials and power requirements, as well as the consumption of actual labor per unit of national income, are still too high in comparison with advanced industrial countries. The achieved rate of economic development is somewhat faster than that statewide, and the share of Slovakia in the creation of national income will increase from 29 percent in 1980 to 30, 5 percent this year.

At the moment, discussion of the deputies has already started, which was introduced by a joint reporter of the committees, Dezider Kroczany. The discussion up until now demonstrates that it will be a good analysis of the current situation in the development of the national economy and the social sphere. Seventeen deputies have asked to speak in the discussion.

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CZECHOSLOVAKIA

EXPANSION OF PRIVATE SERVICES IN BRATISLAVA

AU241028 Bratislava VECERNIK in Slovak 22 Oct 85 p 4

[Article by Engineer Simalova of the Bratislava City Administration of the Slovak Statistical Office: "They Are Filling a Gap in the Provision of Services"]

[Text] Within the framework of improving services for the population, great emphasis is being placed on the utilization of supplementary forms of providing paid services. An important place among them is held by services provided on the basis of permits issued by national committees.

What does this mean in practical terms? Following the amendment of the decree of the Government of the Slovak Socialist Republic No 158 of 1982, some citizens have been allowed since 1 January 1983 to practice skilled handiwork and provide personal services for the private persons--only for private persons, and not for organizations. This activity may be performed with the help of up to five family members. These permits may also be issued for citizens who want to provide services as their main occupation. However, these must be services that are in short supply, the provision of which [by state organizations] would otherwise be uneconomical.

In the Slovak capital of Bratislava, a total of 197 such permits were issued in 1984, 72.6 percent of them to men. Of the total number permits, 60 percent are accounted for by persons who provide services as their main occupation and 40 percent by persons who do this as a side job.

More than three-quarters of all permits were issued for made-to-order production and repair of textiles, garments, leather goods, footwear, and furs.

Compared with 1983, the number of permits increased by 39, of which 25 were permits for making custom-made consumer goods or the repair and maintenance of industrial merchandise; 11 permits for carrying out building work; and 3 permits for the provision of personal services and other unspecified activities. In all Bratislava boroughs, the prevailing form of services are repairs of textiles, shoes, garments, and fur products.

There is great interest in Bratislava in services provided by citizens on the basis of the national committee's permit. These services supplement the network of services rendered by local production enterprises and production cooperatives with activities which are always in great demand and which demand is not fully satisfied.

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CZECHOSLOVAKIA

DIFFERENTIATED CREDIT STRUCTURE FOR ENTERPRISES DISCUSSED

Prague HOSPODARSKE NOVINY in Slovak No 35, 1985 p 1

[Article by Eng Miroslav Zamecnik, vice-chairman, Czechoslovak State Bank:  
"Efforts to Improve Mechanisms"]

[Text] In line with the economic policy of the Party the Czechoslovak State Bank has been developing its functions and banking instruments with the objective of increasing the efficiency of the national economy. In our view such an increase in efficiency will be an important factor in stabilizing our currency. After all, when efficiency is low the formation of credit resources stagnates while demand for credit to cover national economic requirements increases, with the result that pressure is placed on the bank to issue loans to make up for the lacking resources. On the other hand, when national economic efficiency improves, so does the efficiency of credit utilization because the resources that are available may be reallocated from less to more effective production, thereby replacing undesirable loans from a currency viewpoint (those that cover shortages) with loans desirable from a currency viewpoint.

As a part of increasing efforts to strengthen monetary equilibrium and the purchasing power of the koruna we have recently been successful in maintaining the overall level of granted loans in relation to basic economic proportions and indicators. In the first quarter of this year we succeeded in slowing down the increase in loans granted to the enterprise sphere. When compared to the planned and actual increases of the first quarter of last year the increase in loans this year is substantially lower. In future years our intentions with respect to currency issues is to further improve the quality of the loan portfolio and to assure as close a correspondence as possible between the loans that are granted, the loan portfolio, and the development trends in the national economy.

The development of the international division of labor and foreign commercial relations, especially with the CEMA member countries, has brought with it an expansion in the economic role of banks in the conduct of foreign relationships. Foreign currency policy, as a branch of bank currency policy is currently focused on strengthening the principle of foreign currency repayability in the use of foreign currency resources within the national economy, strengthening our exporting capability by granting loans to finance

exports, making improvements in the foreign currency plan, the exchange rate, the system for releasing foreign currency funds, foreign currency incentives, legal supervision and other foreign currency-currency mechanisms.

In the area of foreign currency relations with socialist states we are focusing our efforts on improving the planned balance of payments with the Soviet Union by attempting to develop the conditions for the fulfillment and possible overfulfillment of export targets. At the same time the preconditions are being developed for improving the territorial planning of payments and revenues in conjunction with negotiated protocols covering the exchange of goods and payments. On the whole we are meeting with success in reducing deviations from planned objectives in balance of payments relationships.

In the area of foreign currency relationships with capitalist states we are concerned primarily with assuring planned targets for reducing indebtedness, improving the liquidity of the banking system, and the effective financing of the import needs of the economy. We are devoting attention to improving the time structure and quality of the basic groups of surpluses and deficits in the foreign currency position of our country. The foreign currency regulation of imports is being assured by a direct link between imports and the balance of payments, and above all with fulfillment of plan targets for revenues.

We are currently working on further refining bank functions in the foreign currency area for the Eighth 5-Year Plan. This involves mainly strengthening the standard-setting role of the exchange rate when implementing efficiency enhancing changes in production and foreign trade, strengthening the role of the foreign currency revenues indicator, and expanding the possibilities for granting foreign currency repayable loans. We are directing foreign currency repayable loans to imports which have a fairly rapid foreign currency impact either because they generate foreign currency or adjust import levels. We are currently allocating them mainly to loans for the reconstruction and modernization of production facilities related to increasing exporting capability, conserving imports, for imports needed to implement the results of enterprise research and development work, and on noninvestment imports with a rapid payback period, and which cannot be included in the plan for imports. Last year we wrote 135 foreign currency repayable loans with an overall value of Kcs 2.2 billion in all charges paid prices, which is more than double the figure of the previous year. This year our objective is to increase both the number and the total value of these loans.

As a followup to the Eighth CPCZ Central Committee Plenum the bank has expanded its loan support for R&D and is using interest rate advantaged loans to support above all the introduction and upgrading of production through the implementation of R&D findings. In support of the fulfillment of the tasks of the R&D plan we are also writing operating loans to cover technical development costs and loans that cover short term imbalances between applications and available resources of the technical development fund. Enterprises are less interested in these types of loans, obviously as a result of a relative abundance of in-house resources in technical development funds.



The support of progressive trends within the economy also demands from the bank a stricter loan policy towards those organizations with management shortcomings. Such an increase in strictness is currently being applied mainly to loans that finance inventories, noninvoiced labor, and deliveries. In the sectors of industry and construction alone our branches conducted in 1984 a total of 2,718 on-site inspections of inventories at 1,011 enterprises and organizations. Penalty increases in interest rates were assessed in 16,503 instances and amounted to Kcs 449 million, while reductions in basic interest rates were applied in 1,320 instances in amounts totalling Kcs 75 million.

When discussing projections of planned credit requirements for this year the bank placed emphasis on assuring the breakdown targets of the state plan in the economic plans of economic production units [VHJ] and organizations, on turning over inventories, on assuring deliveries for capital construction projects within planned deadlines, and on further smoothing out credit requirements throughout the year. It is obvious that during economic plan implementation we will have to devote increased attention primarily to the fulfillment of qualitative targets and to utilize more intelligently credit and interest rate penalties and interest rate reductions.

We are focusing investment credits on the support of state plan priorities and the implementation of structural changes. We are also devoting increased attention to the preparatory phases of the investment process. We are trying to assure that all the construction projects that are initiated have been designed properly and meet established efficiency criteria. Although the situation has improved regarding construction projects, the bank failed to approve the possible startup of 23 percent of the submitted projects. We refused to finance these projects until the shortcomings which we noted had been rectified. We are also getting involved in efforts to reduce the number of noncompleted construction projects. Because of delays in beginning operations at certain projects and the failure to meet design specifications during actual operations, we have raised the interest rate for investment credits above the middle of the range. Last year we increased the interest rate by 1 percent in 940 cases and by 2 percent in 536 cases. The bank increased the interest rate in 1,760 instances for failure to fulfill planned construction schedules and for the refusal to adopt assigned binding indicators. In 1984 the bank intensified its control activities and made a total of 10,321 inspections at construction projects with a total value of Kcs 572 billion in budgeted costs. These inspections resulted in savings in financing costs of Kcs 2,4 billion. We have continued this activity this year, at the same time that we are concerning ourselves more with the more evenly distributed facility startups and the achievement of design capacities at new facilities more quickly.

In the area of loan policy we are formulating for the Eighth 5-Year Plan some measures which are related to the planned expansion of the role of internal VHJ and enterprise resources, and a further strengthening of khozraschot. Above all we are improving the system of criteria for the effective use of credit to serve as a basis for loan differentiation. We will differentiate more substantially than previously the level of loan participation in the financing

of enterprise requirements. Loan interest rates will be differentiated based on economic performance and the efficiency with which a given organization utilizes its loans.

In the area of payments and invoicing relationships in treasurer and exchange office operations--the organization and performance of these operations is an equally important role of the bank--there will be an expansion and increase in the quality of bank operations. The number of payment operations increased by 3.4 percent last year to 103.5 million items, while the number of treasurer operations reached 10.9 million items. The number of exchange office operations reached 26.2 million, an increase of 22.6 percent. We will be performing these duties with a smaller number of employees which has been made possible by the stabilization of the system of automated banking operations, the development of progressive forms of, and the broader application of compatible media. The greater utilization of currency accepted by post offices and the strict regulation of banknote and coin circulation will further enhance the efficiency of currency turnover. This is reflected by the fact that even though the treasury turnover at the bank was Kcs 370.5 million, the number of banknotes and the amount of change accepted by the bank for processing declined. In future years in the treasurer-cashier section we are projecting the implementation of further equipment for processing of currency, the introduction of dispensing and depositing automats, and the installation of equipment to handle hard and foreign currency operations.

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CZECHOSLOVAKIA

PROCUREMENT PROBLEMS IN HEALTH INSTRUMENTS, MATERIALS VIEWED

Prague HOSPODARSKE NOVINY in Czech No 35, 1985 p 4

[Article by Eng Zdenka Ruzickova and Eng Ladislav Prusa, State Planning Commission: "The Health Care Dilemma"]

[Text] The results of R&D are implemented not only in the production sphere, but also penetrate into selected areas of the non-production sphere as well. The health care sector is one such area. Here as well there are difficulties in the more rapid practical application of research findings. In many cases these arise from isolated shortcomings of an objective or subjective character. In other instances, however, basic types of modern equipment are lacking. This article concerns itself with the problems arising from this situation.

Since the early 1970s the Czechoslovak health care system has been evolving in accordance with the possibilities provided by the national economy, with the most attention being devoted to the sophistication and quality of preventive, treatment and rehabilitation care. Specific steps have been taken to develop nationwide health care programs, and other advances have been made in the fight against the most serious communicable diseases. By expanding and improving the quality of outpatient care we have developed the conditions for an increase in the comprehensiveness of the health care services offered our citizens. An improvement in the health care available to employees in factories and in agriculture and an increase in the number of factory physicians has helped to make desired improvements in the quality of preventive medicine and to intensify efforts aimed at improving the hygienic conditions of the workplace.

A fundamental precondition for the further development of the Czechoslovak health care system, in addition to improving the quality of organization and upgrading expert and unified management from ministries of health care through national committees and down to national health institutes, should be a policy of no further increases in either hospital beds or numbers of physicians facilitated by a reduction in demand for increases in these indicators through the application of R&D findings. The further development of the Czechoslovak health care system, in other words, is directly dependent on the practical application of modern biomedical and R&D findings to the health care system. Modern treatment techniques will play an important role in the implementation of these tasks.

## Problem No 1: Financial Coverage

The availability of equipment to health care facilities continues to increase. In 1983 the value of machinery and equipment in use in the health care system administered by national committees was Kcs 7.6 billion. Over the past 10 years the amount of capital instruments and equipment has increased by 89 percent, thereby increasing instruments and equipment from 17 percent to 21 percent of the total capital stock of the health care system.

In recent years an undesirable trend has become particularly evident, namely a decline in the innovations incorporated into this equipment, which has meant that the average age of machinery and other equipment has been increasing. As the table below shows, which is based on the findings of the ministries of health care, roughly one third of this equipment is already operationally inadequate, meaning that it must be replaced as soon as possible with more modern equipment.

The age structure of this machinery and equipment was as follows in 1983:

<u>0-5 years</u>	<u>6-10 years</u>	<u>11-15 years</u>	<u>16-20 years</u>	<u>21 and more years</u>
37.9 percent	32.1 percent	18.0 percent	7.0 percent	5.0 percent

The average age of this equipment is about 8 years. In upcoming years the objective should be at least to assure that this average age does not increase, because an increase in the age of the equipment is closely connected with inadequate service of this equipment, which means increases in already serious operational problems.

The critical question for the effective utilization of new medical findings in diagnostics and therapy is the availability of quality health care equipment both in terms of amount and technical sophistication. Sophisticated equipment makes it possible to:

- increase the accuracy of physician work;
- increase the efficiency of the work of health care personnel;
- make timely diagnoses of the symptoms of incipient diseases;
- introduce new and more effective techniques for reducing sick time and in many instances even to save lives.

The current unsatisfactory situation in the health care area has been caused above all by the following facts:

- the financial resources allocated to the health care facilities administered by national committees cannot cover all of the requirements for the procurement of health care instruments and equipment, the prices of which are constantly increasing;



-- domestic production is not capable in a number of instances, because of commitments to meeting export deliveries, of providing the proper numbers and quality of health care equipment;

-- specialized producers within the context of the CEMA are not yet capable of covering all the requirements of the member countries;

-- certain types of state of the art equipment are not yet even being produced in socialist countries and can be obtained only through imports from capitalist countries.

One of the reasons for the low availability of modern instrumentation to health care facilities is the fact that the allocation of financial resources is, for practical purposes, out of the control of the ministries of health care. Because national committees must provide for the development of a number of sectors it is local circumstances which determine the extent to which the needs of the health care system are successfully met. This results in a situation, especially in recent years, when orders for health care instruments have been cancelled because the amount of financial resources available for them has declined.

Because the prices of health care instruments has been rising by 10-15 percent per year (x-ray equipment at one time cost Kcs 20-30,000 whereas its current price is in the Kcs 1 million range), we have found it impossible to replace old machinery with new equipment at the desired rate. The fact that new, very expensive instruments are now being produced (laser scalpels cost for instance in the Kcs 600-700,000 range) increases the economic burden of such purchases. Because there are not enough foreign currency resources available to pay for all the imports that would be desirable, the production of some equipment has been handled domestically even though the prices of this equipment have been as much as 3 times as high as that of imported equipment. The financial resources designated for the replacement of machinery and instruments, in other words, are not adequate to cover even the most fundamental requirements of individual health care facilities.

For the average useful life of this machinery and equipment not to increase it would be desirable for the national committees which are responsible for administering the health care system to allocate at least Kcs 1 billion annually of the resources which they handle for investments in this system. At present only about half this amount is being earmarked for this purpose.

One school of thought is that one of the ways to resolve these capital requirements would be to have central agencies provide the most costly health care equipment (water purification systems for hemodialysis, laser scalpels, ultrasound examination equipment, x-ray equipment). The commitment of financial resources to special purposes for specific sectors managed by national committees is permitted only in very exceptional circumstances.

## **Problem Two: the Production Base**

It is likewise necessary to reevaluate the question of the production of health care equipment. The production of domestic equipment and instruments is assured mainly in the electrotechnical sector and in the general engineering sector. In recent years there have been substantial discrepancies between the requirements of individual institutes of national health and the potential for meeting this demand by the Chirana concern, one of the largest instrumentation producers. The production of a number of instruments has been stopped because of a failure to locate substitutes, and other equipment is manufactured in minimal amounts. In other cases preferences given to experts mean that deliveries to domestic users are severely restricted. The greatest shortages currently are in the production of sterilization equipment, where the requirements of the health care industry for many years have been met only with a minimal number of products. Also in short supply are ophthalmology instruments and laboratory equipment (centrifuges, microscopes, etc.).

Despite these realities it may be stated that our production base has the potential to provide at least a fundamental level of equipment and instrument availability to our health care facilities.

Especially in the electrotechnical industry the production of health care equipment constitutes an extensive production program covering a broad range of products from simple scalpels and needles through very sophisticated workplaces. This product line at present includes more than 5,000 products. Maintaining this line at its current level, near the world state of the art, is placing significant demands on both the R&D and production-technical base, but also on close cooperation with medical research facilities as well as with physicians and health care personnel themselves. Great demands are also placed on a number of producers of component materials, parts and subassemblies. It would therefore be cost effective to concentrate on R&D and production of that equipment for which we have the potential of achieving the world state of the art, and to import all other items on the basis of specialized contracts with individual countries of the CEMA.

To improve the availability of modern equipment to health care facilities pressure must be brought to bear on the domestic production base so that it will incorporate into its production techniques new machinery with improved use values, greater operational safety and reliability, and easy serviceability. Attention should also be paid to the relative material and energy intensiveness of individual products. This is the only way of guaranteeing a rapid improvement in the stock of modern instruments and equipment available to health care facilities.

## **Problem Three: Lack of Balance in Imports**

Cooperation among the CEMA member countries occupies an important place in assuring coverage of the requirements of our health care facilities for modern instruments. This cooperation is arranged mainly in the form of bilateral and multilateral specialized agreements, and in some cases within the context of

individual imports purchased with resources allocated for health care equipment within the framework of the coordination of national economic plans among the CEMA countries.

A number of these specialized agreements, however, are not adhered to by foreign partners. There are also problems with drawn out negotiations concerning deliveries. In a number of instances various modifications have been requested to the machines of individual producers so delivered items would conform to existing regulations concerning technical specifications and hygienic requirements, as well as operating specifications requested by the consumer.

Despite these problems and shortcomings this path is the sole possible way to assure that the health care facilities in individual CEMA countries will be equipped with state of the art health care equipment.

Some types of state of the art equipment are not produced at all in socialist countries. These are imported from nonsocialist countries. Although a statistical study conducted in 1978 indicated that such equipment accounted for only 5 percent of all health care equipment (while domestically produced instruments accounted for 75 percent and equipment imported from other CEMA countries 20 percent), the acquisition value of the equipment imported from nonsocialist countries represented 30 percent of the acquisition costs of all equipment. Estimates are that this figure increased to more than 37 percent by the end of 1980.

There is a serious lack of balance in the importing of health care instruments from nonsocialist countries. This situation is affected mainly by the fact that the limited foreign currency resources allocated for the procurement of this equipment are directed mostly at the outfitting of newly constructed facilities or the equipping of class III or teaching hospitals. The importing of individual pieces of equipment to upgrade or modernize existing health care facilities is largely tied to those foreign currency resources which are granted to specific health care facilities by specific enterprises. The current limit on imports of noncapital equipment and instrumentation from nonsocialist countries has remained at about the same level for 10 years.

Because currently roughly 44 percent of the equipment imported from nonsocialist countries is more than 8 years old, the amounts allocated to maintain this equipment in operation and to process service for it are now inadequate in an environment of constantly rising prices. For this reason large numbers of health care and laboratory equipment that is in need of small repairs are no longer operational.

To provide the funds essential to maintain imported equipment it would be necessary to set aside foreign currency resources amounting to 6-7 percent of the acquisition prices of the imported machinery and equipment, or about 70 million all charges paid korunas annually. These data are based on the current values of imported equipment. If one takes into consideration the physical obsolescence of the instruments and the limited possibilities for finding substitutes for them, along with increases in price ratios it would

probably be necessary to increase the foreign currency resources that are set aside for this purpose by about 3 percent. This means then that in upcoming years we cannot count on any increases in the importing of modern health care instruments and equipment from nonsocialist countries. Accordingly we must begin to place greater emphasis on importing this equipment through specialized agreements with CEMA member countries.

The current stock of modern instruments available to health care facilities directly or indirectly influences practically all areas of the national economy. Among other things it is one of the reasons for the continually increasing costs of caring for workers when they are sick. The availability of this equipment is reflected in the low level of formation of new value, and is one of the reasons for continuing increases in expenditures for medicines. Health insurance payments have increased since 1970 by 28.6 percent. Some 3.5 percent of this increase may be accounted for by new measures in the system of health insurance payments. The increase in number of insured individuals accounts for about 23 percent of the increase, while other factors (including the amount of sickness and wage increases) accounting for the remaining 73.5 percent. Expenditures on medicines increased over the same time period by a factor of three, with Kcs 220 of medicines now being the average used of a single illness. The inability to work is also reflected in the low degree of new value formation—losses incurred for this reason amount to more than Kcs 18 billion annually. These important considerations and serious financial consequences serve to underline the seriousness with which we must approach the process of upgrading and modernizing the stock of instruments and equipment available to health care facilities.

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CZECHOSLOVAKIA

R&D IMPROVEMENTS SUBJECT TO DISCUSSION

More Effective R&D Management Urged

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[Article by Doc Engr Ladislav Riha, doctor of sciences, deputy chairman of the Czech Commission for Scientific and Technical and Investment Development]

[Text] The 16th Congress of the CPCZ, in harmony with the general line calling for creation of a developed socialist society and the intensification of the economic process, placed emphasis on scientific and technical progress and its universal application in social work. The general secretary of the Central Committee of the CPCZ and president of the Republic, Comrade Husak, stated as follows in this connection: "We must attain the planned rates of development of our national economy by broadly intensifying it, through the growth of productivity, through lower energy consumption and material consumption and through the higher utilization of basic assets. The raw materials, materials and fuel-energy resources of domestic origin as well as those which we import remain at the levels attained toward the end of the 6th Five-Year Plan. This means that we must obtain more products and more agricultural products from every crown expended, from every kilogram of metal, petroleum, cement and from each hectare of land—we must attain a higher national income with existing labor and material resources.

"Science and technical progress are the decisive factors of intensification and the most powerful source of growth in the productivity of work in society. The realization of scientific-technical development is a truly revolutionary task for all of society. Only on the basis of applying science and technology is it possible to develop the most progressive of sectors, electronics and microelectronics, complex mechanization and automation, elimination of arduous physical work, expansion of progressive technology and perfection of management and organization of work. The solution of these tasks—as I am deeply convinced—will become a matter of pride and civic honor for our researchers, designers, for our entire scientific and technical intelligentsia."

Following up the conclusions of the 16th Congress of the CPCZ, subsequent meetings of the Central Committee of the CPCZ devoted great attention to scientific-technical progress, particularly the 8th session called to speed up the application of the results of science and technology in practice. This

session stressed the need to solve both topical questions pertaining to scientific-technical progress, as well as the more longer-range strategic problems in this area.

Intensive development represents a new dimension in economic development and, thus, also new demands for management activity and utilization of scientific-technical progress. It is connected with assuring the growth of national income and production, with raising productivity, particularly of embodied labor, with making more effective use of fuels and energy, raw materials and materials, as well as making investments and basic assets more effective. These processes logically require appropriate changes in approaches by people in the entire management structure, in the planning of economic and social development, they require changes in the functioning of economic and moral stimuli, etc. It is also necessary to create a higher degree of harmony between all-societal, group and individual interests and to place emphasis on the qualitative side of production and the entire reproduction process. An important aspect of intensive development is the constantly deeper involvement in the process of international socialist economic and scientific cooperation and socialist economic integration. A decisive factor in intensive development is also the constantly broader development and utilization of the initiative of individuals and the expanding of their participation in management.

However, a decisive prerequisite for intensive development is its organizational unity with scientific and technical progress and its extensive utilization in social practice in the interest of increasing the effectivity of production and the quality of all work. That is why the 16th Congress of the CPCZ as well as the 8th Session of the Central Committee of the CPCZ simultaneously placed great emphasis on the creation of a scientific and scientific-technical policy, on the further perfection of the system of planned management in the national economy and, within its framework, of managing scientific-technical progress, upon the innovation of production programs and products, a speedup in their modifications and on solutions pertaining to decisive tasks in scientific and technical development.

In this connection economic production units and enterprises oriented their sectoral and enterprise programs toward a more intensive innovation of the production assortment, toward increasing quality and improving the utility characteristics of their products and more readily modifying their assortments. They also devoted great attention to applying new progressive equipment and technologies to the modernization of selected development capacities, which were goal-oriented to the intensive utilization of all production resources and the more profitable use of basic raw materials, materials, fuels and energy.

Branch sectors oriented their programs toward completing the basic goals of their technical policy and the analysis of the causes of failure to achieve projected parameters with respect to selected finished innovation actions. In conjunction with decisive directions of scientific-technical development, which were identified by the 8th Session of the Central Committee of the CPCZ, they are aiming their measures at introducing and utilizing chemicalization, robotization, industrial product-handling equipment, microelectronics and biotechnology.

Peak organizations, particularly newly established commissions for scientific-technical and investment development, are devoting attention to the creation and realization of scientific-technical policy, to the preparation of plans for development pertaining to science and technology and to goal-oriented coordination in realizing the measures adopted at the 8th Session of the Central Committee of the CPCZ, to control of their fulfillment and to harmonizing state scientific-technical policies with future or existing basic documents such as the "Cumulative Prognosis of Scientific-Technical, Economic and Social Development in Czechoslovakia"; "Basic Directions of Economic and Social Development in Czechoslovakia Through 1995" and directives for the preparation of the 8th Five-Year Plan. On the basis of their proposals, the various governments adopted measures having a systems and suprasectoral significance, whose successful application in management practice is the prerequisite for successful realization of the conclusions passed down from the 8th Session of the Central Committee of the CPCZ.

#### Perfection of Management With Respect to Scientific-Technical Development

Together with further scientific-technical development in our country, together with deepening international cooperation and integration in the development of creative initiative among people, it is desirable to perfect the entire system of planned management in such a way that it would become more effective in its influence upon the development and broad realization of science and technology in social practice and, at the same time, it is desirable to perfect the system of managing science and technology as its organic component. Some experiments are being currently conducted in this area. In perfecting planning, reliance is being placed primarily upon the broader application of the goal-oriented approach and, in this connection, upon the creation and realization of state goal-oriented programs in decisive sectors involving structural changes along with the application of some indicators expressing qualitative changes in production, etc. Great attention is also being devoted to the creation of state and republicwide scientific-technical programs. The method of coordination planning of tasks involved in the plan of technical development, that is to say, in research and development tasks including realization outputs from state goal-oriented programs, from state and republicwide scientific-technical programs and independent tasks contained in the state plan of technical development, utilizes the goal-oriented program approach similar to the one used for the 7th Five-Year Plan.

In the area of stimulation, it is expected that the effects of economic incentives, particularly the system of remuneration, financing, prices, deductions, credits, etc., will be intensified. Great emphasis is being placed upon strengthening the tasks of moral stimuli. As far as the actual management of scientific-technical development is concerned, new directives were recently issued which facilitate better remuneration for efficient workers in this area, a directive stating the principles for financing scientific-technical development was amended and several other regulations were either amended or rescinded.

On balance it is necessary to stress that the approved Main Directions of Further Development Pertaining to the Set of Measures To Perfect the System of



Planned Management established the need to develop all basic sectors of planned management in mutual dependence upon each other as well as the individual measures contained therein which are aimed at the more rapid introduction of the results of science and technology in practice. It is particularly required that the decisive intentions of state economic and technical policy be assured in the state plan through the establishment of scientific-technical programs and that they be applied in state goal-oriented programs and in programs involving connection with socialist economic integration. It is further expected that demanding conditions will be created by utilizing the mobilizational and binding nature of the tasks contained in the plan as well as of the instruments of material stimulation and that pressure will be created upon innovative activities at organizations in the economic sphere, that effective influences will be exerted by customers and users upon the technical and economic parameters of delivered products and upon the availability of deliveries needed by technical development. In the area of capital construction, the Main Directions prescribe a broader-than-hitherto realization of the outputs from scientific and technical development and call for support of rapidly returnable modernization and reconstruction. It is further expected that leading economic workers of technical units and workers of collectives who exert a decisive influence upon the realization of scientific-technical progress, on the qualitative side of production, on the attainment of parameters involved in tasks of technical development and on fulfillment of deadlines set for their solution and realization, will be stimulated substantially more intensively than has been the case heretofore. More intensive involvement in socialist economic integration will create room for joint solution of tasks involved in scientific-technical development through the broader utilization of higher forms of cooperation between organizations of CEMA countries.

In the area of scientific-technical development, let us mention the new directive on financing noninvestment expenses involved in the development of science and technology (Directive No 118/84), which is effective as of 1 January 1985, is better arranged and simplified in comparison to its predecessors and its utilization should result in lowering the amount of administrative work and should render the financing of development tasks for science and technology more elastic, both in the research and development phase, as well as in the subsequent realization phase. The new directive respects the principles expressed at the 8th Session of the Central Committee of the CPCZ and is intended to help accelerate the application of the results of science and technology in practice. It adjusts the method of creating and utilizing resources for financing noninvestment expenditures for the development of science and technology in state socialist organizations, in concerns, in special-purpose concern organizations and in foreign trade organizations.

It specifies what are noninvestment expenditures for the development of science and technology; in other words, expenses for:

1. solving tasks involved in the plan of development for science and technology or its components or their preparation;
11. payments for acquisition, from other organizations, of nonmaterial results pertaining to solved tasks in the plan of development for science and technology;



- iii. payments for the acquisition of industrial rights and production-technical know-how from abroad for future production or operation;
- iv. preparation of realization pertaining to results of planned tasks, industrial rights and production-technical know-how;
- v. additional noninvestment requirements involved with the development of science and technology.

The directive also specifies that expenditures for tasks involved in the plan of science and technology development are destined for work performed in the supplier mode or performed at the enterprise's own expense, including expenditures for:

- i. acquisition of instruments, machines, installations or temporary structures designed to solve a single task in the plan of scientific and technical development;
- ii. purchase of finishing components for a developed new product or installation and the costs of adjusting standard machines creating its parts;
- iii. products or work arising in the development or testing of a new product and installation or in verifying new technology, in quantities and extents essential to the testing.

The decree contains new formulations which indicate that noncapital expenditures for the development of science and technology may be used to acquire instruments, machines and installations, including essential construction adjustments for purposes of permanently solving tasks contained in the plan of development for science and technology only by economic organizations which establish funds for technical development and by economic organizations of the research and development base; furthermore, instruments, machines and installations, including essential structural adjustments for the realization of solved tasks contained in the plan of development for science and technology, of industrial licenses and production-technical know-how from abroad by all economic organizations, but exclusively with the approval of the superior central organ. Objects having a basic asset nature, which are acquired according to the above rules and are financed from the resources of the organization which will use them, are transferred, free of charge, to that organization's basic assets within the time frame and at values established by special regulation.

The decree also specifies the utilization of the fund of technical development of an enterprise, of an economic production unit and an industry sector and reemphasizes that any funds remaining are transferred to the succeeding year at full value. Simultaneously, there is an intensification of personal material incentives for workers with respect to the acceleration of scientific-technical development. Workers, particularly creative workers, having an advanced school education and a recognized scientific or scientific-technical qualification step within technical development units, who constantly achieve outstanding work results in solving and realizing tasks of the plan, can,

while observing consistent differentiation, have the organization set their basic pay as much as 10 percent above the upper limits of the basic pay scale; also, in organizations in which firm wage tariffs and personnel evaluations are observed in administering technical and economic remuneration, such workers can have their wage tariff increased by 10 percent. Workers, and primarily creative workers, who are in tariff class 13 or higher and who have made extraordinary contributions through their long-term results toward increasing the technical-economic level of the sector and who solve complicated plan tasks of the development plan for science and technology, can have their personal pay raised above the limits of the wage regulations for a predetermined period of time, up to a level of 7,500 korunas per month. On the basis of work result evaluations, it is possible to extend this period or to adjust the level of personal remuneration. The appropriate minister or chief of the central organization involved makes the decision with regard to the granting and changing of personal remuneration levels and extending the specific duration of bonus payments. The minister or chief of the central organization involved can, within the framework of created budgetary reserves in the wage plan, agree to extraordinary remuneration for a particularly successful solution and realization of significant tasks involved in technical development. It can be granted to workers who have the most credit with respect to the results achieved and, with respect to an individual, can amount to 5,000 to 50,000 korunas per individual task. The minister can delegate the authority to decide to grant these bonus payments from the reserves of the minister to the general director of the economic production unit charged with extensive tasks of technical development.

Following the 8th Session of the Central Committee of the CPCZ which called for acceleration of the application of the results of science and technology in practice, there is a justifiably emphatic demand for investment policy to become more specifically oriented toward the realization of scientific-technical progress in practice. In this connection, emphasis was also placed upon the establishment of pilot plants and verification plants, supporting solution of tasks contained in the state plan for scientific and technical development.

This problem had always been the subject of attention in methodological directives pertaining to working out proposals for the 5-year plans or for annual plans and in appropriate regulations; however, the practical possibilities at the disposal of the national economy had not been the same during varying time periods. For the most part, pilot plants and verification plants were considered to be temporary projects, were financed from noncapital costs set aside for solving tasks of the science and technology development plan and were not included in the plan of capital construction. In 1977 it was specified that, for purposes of establishing temporary projects, simplified planning documentation would be in effect for projects valued at up to 2 million korunas and, with respect to projects valued at more than 2 million korunas, a one-step design would be called for within the sense of valid decrees. Furthermore, appropriate issuances authorize the director of the economic production unit to approve temporary projects as independent phases in solving tasks contained in the plan for science and technology development with respect to projects valued at up to 2 million korunas; for projects above 2 million korunas but below 10 million korunas, authority was vested in the appropriate sector minister

and with respect to projects valued at more than 10 million korunas authority for approval was vested again in the sectoral minister with the proviso that he would present a listing of all projects during the planning period for approval to the federal minister for technical and investment development. This status essentially existed also during the 7th Five-Year Plan.

In order to speed up realization of the results of solved tasks from the plan of scientific and technical development (and this question is connected with the problem involving its greater relationship with the plan of design work and the plan of basic asset reproduction) the Uniform Methodological Directives for Working Out Proposals for the 5-Year Plan for 1981 to 1985 and the Proposal for the Implementing Plan for 1981 stipulated that the coordinating central organization is obligated, in cases where the realization of results of the solutions requires capital construction, preparation for which has thus far not been begun, to assure, at the latest halfway through the project solution, but at least 2 years prior to its planned termination, the working out of a procedure for preparation and realization of capital construction, together with proposals for investment intentions, including justifications in accord with valid decrees covering the documentation of construction projects. At the same time, the coordination plan (the realization list) contains deadlines for preparation (investment intentions, design tasks and preliminary designs) and details of the actual capital construction (initiation and termination), as well as the title and address of the investor and the title of the construction project inasmuch as its investment intention may have been announced or if it is contained in the name list of the capital construction plan for reproduction of basic assets (in such an event it is listed in conjunction with it). Inconsistent adherence to these provisions covering methodological directives or other problems (for example, a shortage of construction capacity, etc.) adversely influenced the justified tendencies toward accelerated realization of the results of science and technology in practice.

The establishment of a research and development base from the standpoint of investment needs, be they the costs of construction, completion of construction, or reconstruction and modernization of actual research institutes, their laboratories, and prototype workshops or operations as well as the provision of necessary machines, instruments and installations and, in recent times, in a number of instances also the equipment of facilities with automatic data processing equipment, continues to be a problem, both in the area of the centrally managed organizations of the research and development base, particularly with respect to budgetary organizations, as well as at institutes and work sites of the research and development base under the jurisdiction of economic production units. A negative influence on the quality and speed of solving science and technology development tasks, and thus upon the accelerated application of their results in practice, is frequently exerted not only by the physical but also the moral obsolescence of instruments and facilities due to a shortage of necessary funds for renewal and expansion of instrumentation, and sometimes is the result of a shortage of the most essential structural adjustments.

During the current period, the above-mentioned issuance of the amended decree on financing noncapital expenditures for the development of science and



technology expands the possibilities for using this financing for the acquisition of machines, instruments and facilities, including necessary construction adjustments in the interest of permanent solutions of scientific-technical work and the realization of solved tasks plan of science and technology development, particularly with respect to economic organizations where technical development funds are being established and with respect to economic organizations of the research and development base; where utilization for realization purposes is concerned, then the decree applies to all economic organizations but specifically only with the approval of the superior central organ.

The adopted Main Directions of Further Development Pertaining to the Set of Measures To Perfect the System of Planned Management of the National Economy state, among others, in the area of reproduction planning for basic assets as follows:

1. rescind the existing limit of 2 million korunas RN [expansion unknown] (5 million korunas RN) and expand the application of capital assets to all economic organizations, with the proviso that capital asset creation will be adapted to the specific conditions existing in some organizations;
- ii. in the formation of state plans, utilize the division of investments for binding construction projects, centralized construction projects, other construction projects and machines and installations not included in the budget of construction projects. Proceed from the assumption that centralized construction projects do not base their recognition of a higher degree of importance in the reserves they obtain from the state plan or through an independent category of realization;
- iii. provide priority assurance for construction projects and the SZNR [expansion unknown] which realize profitable outputs provided by the state plan for development of science and technology and state goal-oriented programs, as well as with respect to investor and planning preparation of construction (goal-oriented utilization) of pilot plants and verification operations which assure the solution of tasks contained in the state plan for development of science and technology;
- iv. within the framework of other construction and SZNR, orient the central organs of investors and suppliers toward capital projects having a suprasectoral character, particularly designed to assure outputs from the scientific-technical development, from state goal-oriented programs and as a result of comprehensive modernization;
- v. provide priority support for outputs from scientific-technical development and from state goal-oriented programs at all levels of management; at the level of the state plan, monitor and evaluate preparations of major remodeling projects, particularly with projects valued at more than 10 million korunas--more than 20 million korunas in the case of SZNR projects and make sure that economic plans cover the remaining projects (with possible integration of the State Commission for Scientific-Technical and Investment Development) within the framework of planning resources and stipulated economic conditions (levers).



During the 7th Five-Year Plan a number of provisions to increase the effectiveness of planning the reproduction of basic assets, as stipulated in the Set of Measures to Perfect the System of Planned Management of the National Economy After 1980, began to be gradually applied and was the starting point for intensified management in this area for the 8th Five-Year Plan.

The Set of Measures from 1980 already called for the unified use of the plan for reproduction of basic assets to safeguard the realization of results produced by the development of science and technology and by planned structural changes and stipulated that comprehensive investment proposals of programs, including investments spilling over into other sectors, should be verified, evaluated and assured. The measures further stated that it is necessary, on the level of the state plan, to evaluate and assure construction projects supporting state goal-oriented programs valued at more than 10 million korunas and to provide support for programs under the jurisdiction of central organs in the tasks and limits contained in economic plans purposefully and on a priority basis, as well as provide support for other construction projects and the SZNR. Support for capacity needs of programs was expected to be accomplished primarily through higher utilization of existing capacities, through modernization and reconstruction.

Last but not least, the Set of Measures stipulated that construction projects representing the realization of state tasks of technical development whose capital costs for machines and installations exceed 20 million korunas, are to be supported in the plan always in the form of centralized construction projects and the possibilities of transferring the funds to other projects is to be excluded.

In conjunction with these changes and as a result of measures adopted in the Main Directions, it will be desirable to improve the investment support of scientific-technical development. In all areas of improved management, emphasis is currently being placed also on reducing the administrative intensity of managing scientific-technical development.

Even for the future, it will be necessary to devote systematic attention to these questions in such a way as to create more favorable conditions for innovative activity within economic production units, within enterprises and institutions and in an effort to achieve universal application of the findings of science and technology in practice in the interest of intensification, of increasing the profitability of economic development and of improving the quality of all work performed.

#### Develop Prognostic Activity

The development and perfection of management under conditions of socialism must support particularly the planned nature of social economic development. Great importance is attached particularly to long-term planned management, which must be preceded by the identification of long-term trends in economic, social and scientific-technical development. This is particularly important for decisions regarding extensive scientific-technical and investment intentions (for example, in the area of fuels and energy, in the metallurgical and

chemical industries, in engineering, etc.) whose realization is a matter of several years, which cost billions of investment funds and whose life expectancy is normally counted in decades. That is why work on long-term prognoses pertaining to scientific-technical, economic and social development in Czechoslovakia has intensified. This work will proceed from the broad utilization of potential opportunities at the disposal of science and technology and will be utilized in preparing basic directions of economic and social development in Czechoslovakia for periods of 10 years, as well as for individual 5-year plans.

Current and future prognostic work should terminate in the Cumulative Prognosis of Economic and Social Development in Czechoslovakia Over a 20-Year Period which would be systematically and substantively intensified through the permanent activity of appropriate organs and organizations to the extent necessary and would be extended in increments of the appropriate time horizon (5-year or longer). This activity ties in with similar work which was developed in Czechoslovakia in the previous era and which made a significant contribution to setting the goals for economic, social and scientific-technical development.

Prognostic work was initiated as early as the 1960's and developed in the 1970's, particularly after the 16th Congress of the CPCZ. The 8th Session of the Central Committee of the CPCZ also placed great emphasis on working out long-term prognoses with respect to economic, social and scientific-technical development as a base for intensifying and improving all planning activity. The Government of Czechoslovakia, therefore, set a number of tasks in this area. They are intended to gradually result in working out a cumulative prognosis for scientific-technical, economic and social development in Czechoslovakia by the year 2010. Its goal is to capture the strategic directions of development in science and technology, in the development of the economy and in the social sphere while intensifying Czechoslovakia's involvement in the international socialist division of labor and taking into account specific questions pertaining to the republics and their territories.

The cumulative prognosis should be aimed at five basic areas:

- i. development and application of science;
- ii. strategic intersector directions of scientific-technical development in the national economy;
- iii. fundamental trends of development in the economy, application of the principle of intensification and formation of the optimum structure of the Czechoslovak economy;
- iv. trends in the application of the statutory nature of further social development;
- v. some questions pertaining to the specifics of scientific-technical, economic and social development in the CSR and SSR.

In this area the Czechoslovak Academy of Sciences was identified as the central workplace and will independently work out the Cumulative Prognosis in close cooperation with the State Planning Commission, the State Commission for Scientific-Technical and Investment Development and other organs and organizations. One of the carrier blocs of the Cumulative Prognosis upon which attention is concentrated are the intersectoral directions of scientific-technical development toward which the 8th Session of the Central Committee of the CPCZ oriented the activities of the scientific, research and development base.

Among the most significant items, for example, is the development and effective utilization of the raw materials and materials base of Czechoslovakia and an orientation toward a high value utilization of all resources through the intensive utilization of their content and material and technical parameters, as well as the lowering of the energy intensiveness and an optimal structuralization of the Czechoslovak energy base. Development of comprehensive automation on the basis of development and application of electronics, microelectronics and other systems is also important. A key task is also solution of the protection and creation of the environment, particularly the fight against air and water pollution.

As far as support for the prognoses of strategic intersectoral directions in scientific-technical development is concerned, work on their null variant was ongoing recently. It was organized as a special phase in the clarification of some fundamental questions of future scientific-technical development and their utilization in the formation of basic directions of economic and scientific-technical development for the period 1986 through 1993 and for the preparation of the 8th Five-Year Plan of development pertaining to science and technology. In this regard, it is assumed that scientific-technical progress is a decisive factor of intensification and that is why the strategic intersectoral directions are also evaluated in unity with their scientific-technical, economic and social aspects. This is largely a question of a realistic evaluation of the possibilities of scientific-technical development in general and of selected strategic intersectoral directions for supporting the dynamics of economic development in Czechoslovakia in particular. The work is directed by the Working Commission for the Prognosis of Strategic Intersectoral Directions of Scientific-Technical Development and the individual directions are managed by working groups. The Research Institute for Scientific-Technical Development was assigned as the principal work site for the preparation of prognoses. The individual leading work sites were named as having jurisdiction over working out appropriate problem areas. Simultaneously, and for purposes of confrontation, a summary paper on the trends of development in science and technology is being prepared. Gradually, work on other blocs which will go to make up the cumulative prognosis is developing.

Great attention is being devoted to prognostic activity in organizations of the CSR and the SSR. For example, the Commission for the Coordination of Work Involving Cumulative Prognoses of Economic and Social Development in the CSR is particularly engaged in a cumulative analysis of socioeconomic developments as a basis for subsequent work; it is also dealing with problem areas of the Cumulative Prognosis, that is to say, with establishing responsible workplaces to solve individual problems, it is assigning tasks in the creation of the



prognosis and is dealing with partial and cumulative results of the work and their individual areas and prognoses as a whole. Great attention is being devoted to such questions as natural and raw materials sources and protection and improvement of the environment.

Let us look at some starting points in the creation of the Cumulative Prognosis for Economic and Social Development in the CSR in the manner in which they were included in the work program.

The conceptional program of work on the Cumulative Prognosis of Economic and Social Development in the CSR for a 20-Year Period is based on evaluations of existing theoretical-methodological findings; it takes into account existing experiences in this country and in socialist (primarily USSR) and nonsocialist countries. Its intentions take into account the conclusions of the CPCZ Congress, are based on recognition of the legalities and trends involved in the development of socialist society under conditions existing in the Czech Socialist Republic, are based on the fact that the entire future phase of development is characterized by the need to make the Czech economy more dynamic through developing scientific-technical progress and firmly anchoring it in all areas of societal life.

The Cumulative Prognosis for the Czech Socialist Republic will represent the principal preplan document which will provide the political, state and planning organs with a set of scientifically based substantive and methodological starting points as a foundation for making decisions in selecting and determining a strategy for fulfilling the basic goals of socialist society. Simultaneously, it will investigate the goals of development but also the possibilities of making a transition from today's economy to a status which is programmed and goal-oriented, that is to say, it will point out the basic directions of future economic and social development. Its task and its important content will include the specification of processes, manifestations and trends which objectively support the directions of development or which, possibly, impede them.

Work on the Cumulative Prognosis is based on the fact that the economy of the Czech Socialist Republic currently accounts for more than 71 percent of the national income of Czechoslovakia and, thus, exerts a significant influence on the overall development of the economy; it is also based on the requirement that future development must intensify the unity of the Czechoslovak economy with society. Therefore, it will capture the specifics of the Czech Socialist Republic, their causes and the manner in which they predetermine development in the CSR and in Czechoslovakia as a whole. In this sense, it must fulfill its active function in relationship to the Cumulative Prognosis of development throughout Czechoslovakia, as well as in its social and economic component and in establishing prerequisites for the development of a unified Czechoslovak economy. It must take into account the extent of predetermination, given primarily by production factors, demographic developments and external relations. In this area, it is necessary to proceed from the conception of development pertaining to the socialist economic integration of CEMA countries, to intensify relations with the USSR and to create realistic prerequisites for contacts with developed capitalist nations. It is necessary to devote attention



to additional development pertaining to mutually advantageous cooperation with the developing countries.

Together with solutions of objective problems, the Cumulative Prognosis for the Czech Socialist Republic will also contain directions for further development of the conditions for their realization in the system of planned management. With its content, it will represent an integrated view of societal, social and economic processes which will make it possible to formulate the fundamental tasks of economic and social development in the Czech Socialist Republic over a period of 10 years and 5 years on the basis of objectively identified long-term trends.

Prognostic work is supposed to contribute to strengthening the planned and comprehensive nature of management pertaining to development affecting all of society. An important prerequisite in this area is the connection between the Cumulative Prognosis and the fundamental directions of economic and social development over a 10-year period and directions pertaining to the 5-year plan. On the one hand, the Cumulative Prognosis should, thus, serve as a basis for optimizing structural changes and selecting the fundamental directions of development, and on the other hand, the findings made during the course of working on fundamental directions and directives for the 5-year plan must contribute to working out the Cumulative Prognoses.

For the future, further development of the system of planned management of the national economy and management of scientific-technical progress is expected in the future. In this regard it is desirable to see to it that the system of management acts to the required extent upon the long-term strategic effectiveness of economic development which is, generally, replete with the realization of innovations of a higher magnitude which are normally connected with an express increase in the productivity of labor and of investment resources. Generally, even the more significant measures, accomplished within the framework of socialist economic integration, tend to have a long-term character. The planning of economic, social and scientific-technical development, including an ever broader application of the goal-oriented programmed approach in planning and management processes, must make an effective contribution in this regard. Along with this, it is essential to fully utilize all operational reserves, rationalization measures, improvement proposals, innovation solutions and quick-return and less investment-intensive innovations throughout economic production units and enterprises.

During the further development of the Set of Measures To Perfect the System of Planned Management of the National Economy it is necessary to accent the growing difficult conditions of the upcoming period, as was stressed by the 16th Congress of the CPCZ and underlined by the 8th Session of the Central Committee of the CPCZ; it will also be necessary to perfect proven elements of management and to reselect those which are decisive, particularly for accelerating the process of introducing the results of science and technology into practice and of involving the Czechoslovak economy in the international division of labor, particularly with respect to socialist economic integration.

The perfection of planning urgently requires the realization of the principle of strengthening prospectivity, which is based on the results of ongoing work with respect to long-term outlooks and the projection of its conclusions into the work involving preparations for the 8th Five-Year Plan. In creating long-term outlooks and the resulting 8th Five-Year Plan it is necessary to apply the uniform concept of the system of criteria of economic profitability which expresses the final benefits obtained by society.

A whole series of measures were adopted or being reworked to facilitate the more rapid introduction of the results of science and technology in practice; among those to be pointed out is the strengthening of the goal-oriented approach, because the decisive intentions of state economic and technical policy will be supported in the state plan by the stipulation of state goal-oriented programs, state and republic scientific-technical programs and involvement in the programs of socialist economic integration. Innovation activity is to be still more subordinated to the demanding worldwide technical-economic parameters and must contribute to the higher degree of intensification and profitability of economic development and to the improvement in the quality of all work performed.

#### 8th Five-Year Plan R&D Planning Methodology

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[Article by Eugen Liska, State Planning Commission]

[Text] The method of planning scientific-technical development for the 8th Five-Year Plan<sup>1</sup> applies the goal-oriented approach, the coordination of tasks and makes use of the system of indicators of the technical-economic level of products and production which were worked out with the use of results of economic research.

#### Goal-Oriented Programmed Approach

The goal-oriented programmed approach is specified primarily in state goal-oriented and state scientific-technical programs.

State goal-oriented programs are of a conceptual realization nature and are oriented toward solving the most important economic intersectoral problems and toward applying the results of research and development during the 8th Five-Year Plan. State scientific-technical programs are goal-oriented tasks involving research and development whose results, which assure sectional problems of carrier directions involved in scientific-technical development in conjunction with economic and social tasks, will be realized over a longer period of time exceeding a single 5-year plan. For the 8th Five-Year Plan, this largely involves the following areas:

1. in state goal-oriented programs, it is the development of nuclear energy, the rationalization of the consumption and utilization of fuels and energy, the rationalization of the consumption of metals, hydraulic elements and aggregates, robotization of technological processes, high-output semiconductor

transducers and components, development of the material-technical base for electronification, development of the application of electronics, development of selected chemical products, progressive transport systems, rationalization and modernization of the stockpiling economy, creation and protection of the environment and greater utilization of secondary raw materials;

2. with respect to state scientific-technical programs, it is a matter of the extraction and beneficiation of fuels, increasing the technological level of metallurgical production, new ferrous and nonferrous materials, a decisive progressive engineering technology, new power units for motor vehicles and for industrial use, complete with their accessories, problems of developing the agricultural-industrial complex, improving the profitability of basic links in the transportation system, including technical means, improving the level of telecommunications services, improving the profitability of above-ground construction projects, technological, engineering and material changes in the textile and clothing industries, selected biotechnologies including their machines and installations, health care of the populace, state information system for scientific-technical development, development of packaging systems, radionuclides and nuclear instrumentation technology and the development of electronic instruments.

According to the aims of these programs, action organizations are working out designs<sup>2</sup> in two phases with participation of central organs, the Czechoslovak Academy of Sciences and organizations subordinate to themselves. While the first phase specifies the intentions of programs invariants pointing toward possible approaches and methods of solution, the second phase of the work aims at working through and making more precise goals and resource requirements in conjunction with the results of variant design discussions and concentrates on a consistent tie-in between the program and organizational components with those proposed by the 8th Five-Year Plan. If the action component and other interested central organs (supplier as well as consumer components) do not come to an agreement with regard to the decisive tasks which facilitate successful realization of the future program, the action component is obligated to negotiate the dispute with the State Planning Commission and with the State Commission for Scientific-Technical and Investment Development.

The program contains goals, means of realization and assurance.

Program goals are expressed by indicators as follows:

- i. the indicator of the technical-economic level of production and products, according to the program intentions, for example, technical parameters, savings of raw materials, fuels, energy, metals and wages;
- ii. by the product manufacturing indicator or another action indicator according to the character of the program;
- iii. by the indicator of total producer costs for the production of merchandise or for another utilized action indicator;
- iv. by the indicator for export deliveries;

v. by the indicator showing lowered producer costs as a result of innovated technologies and additional anticipated effects.

The realization of goals is assured by state and other significant tasks of research and development (including basic and economic research) and by the realization outputs from the plan of science and technology development which are decisive with respect to accomplishing the program. The research and development tasks are documented through technical and economic data involving changes in quality with regard to their planned results, with regard to deadlines for initiation and completion. Realizational outputs are aimed primarily at the volume of production of the most important innovated products and at decisive innovated technologies, as well as at other projects aimed at the realization of plan goals, for example, tasks involving scientific-technical cooperation, licenses, standardization tasks, new, reconstructed and modernized capacities and suppression of production.

Support of programs includes coverage of the requirements of research and development tasks and realization of their results through:

- i. the volume of work and deliveries for capital construction,
- ii. the number of employees by principal resource or by decisive qualification and professional breakdown,
- iii. funds for purchase of licenses and the importation of instruments, installations and selected materials,
- iv. noncapital means provided by the state budget,
- v. the necessary raw materials, fuels, energy, semifinished products and completion products from domestic sources,
- vi. the volume of exports in cooperation which have a bearing on deliveries from abroad for the program.

These goals, ways and means are included in the tasks of the appropriate sectors of the plan (industrial production and sales, foreign trade, development of science and technology, standardization, reproduction of basic assets, design work, material-technical supply, work and wages, finance, international socialist economic integration, etc.) with central organizations required to give priority treatment to subdeliveries which are decisive to the program.

#### Coordination of Tasks

Research and development tasks supporting the goals of state goal-oriented and scientific-technical programs, including republic-level programs and independent tasks contained in the plan of technical development, are worked out in a coordination plan which has three parts: main task indicators, task breakdown and result realization.



This plan primarily serves the needs of a comprehensive assurance of individual tasks in the plan of technical development and assures the cooperation of all organizations in the entire cycle of research--development--production--utilization. It specifies all required time frames, technical and economic data which affect the fulfillment of planned activities and their control from inception of the solution to the realization of results, and identifies the work sites involved and future realization of organizations. It is also worked out for tasks of technical development which appear in economic plans with a possible modification required by their ultimate aims. Absolute agreement must exist between the data appearing in the coordination plan and the tasks listed in the subsequent sections of the national economic plan.

#### Composition of the Coordination Plan

1. The principal indicator portion pertaining to the task of technical development contains the title of the task, the goal of its solution and its technical-economic parameters (for example, output, magnitude, measured consumption of fuels and energy, service, life expectancy, productivity of labor), deadlines for the solution (inception and termination), means for assuring it (noncapital means, including those from the state budget, foreign exchange requirements for workers, etc.), previously announced bonuses for solving the task, the anticipated economic effect of realization and for those realizing and utilizing the product or service (annual savings in fuel and energy, raw materials, materials, manpower, producer costs, increased volume of production and exports, lowered imports, profit increment) and the utilization results of basic research, Czechoslovak discoveries, inventions, innovation proposals, licenses, scientific-technical cooperation and foreign documentation.

2. The task breakdown portion includes the title of the fractional task, the costs connected with its solution, the individual phases with deadlines for inception and termination, the people responsible for solution of individual fractional tasks and the costs of prototypes, verification operations and pilot plants with deadlines for design preparation, construction and listing the organization charged with making all acquisitions.

The phases correspond to the more detailed breakdown of research and development pertaining to machines, instruments and installations, research and development of technology and other results of task solution. Thus, for example, the following phases are listed with respect to machines, instruments and installations:

- i. solution of a new principle and verification of models pertaining to its key portions;
- ii. research and working out of the foundations for development;
- iii. working out the project for the fundamental composition of the prototype;
- iv. working out design and technology bases for the production of the prototype;

- v. production of the prototype;
- vi. verification and pilot planned testing of the prototype;
- vii. working out design documentation for the production of the test series or for series production.

In research and development of technology, for example, the following phases are involved:

- i. basic research;
- ii. applied laboratory research;
- iii. verification of functional models and working out the basis for production of pilot installations;
- iv. establishing pilot operation and verification operation;
- v. pilot plant tests or verification operations;
- vi. working out technological documentation and design documents for technological installations and for the planning of future production.

In instances where the result of solution is not a new machine, an instrument, or an installation or new technology, the phases of solution are established in accordance with the nature of the task.

3. The part of the plan dealing with assurance of realization pertaining to the results of the tasks has the following components: the name of the realizer and the title of the realizational output, the technical-economic parameters, the volume of production in units of volume and value, the price (cost) limit, the assurance of the realization through investment means and imports, deadlines for the preparation of production and capital construction and the anticipated economic effect.

Within the plan preparation phase, the coordinating central organs work out this part and, following the conclusion of the task solution, the realizers of the results work it out as an independent planning document for including the realizational outputs of technical development into the executive portions of the plan.

The coordinating central organ which is established for each task is responsible for its continuity and for the assurance of all parts of the task of technical development, including the realization of its results. It can delegate the activities essential for the coordination of the cycle to its subordinate organization (the so-called coordination work site) but it cannot transfer to it the responsibility and delegate to it the execution of the action. The signature of the statutory representative and the general director of the middle management organization of the realizing organization confirms the correctness of the data in all parts of the coordination plan, its discussion and approval

by all those involved in the task solution and by all realizing organizations, including the assurance of the task and its realizational outputs, as well as the projection of its effects into the appropriate segments of the plan.

The plan for scientific and technical development also includes tasks which assure the goals of state programs of basic and applied economic research. Their plans have a virtually identical composition:

- i. title of task;
- ii. anticipated utilization of results;
- iii. coordination work site and name of coordinator;
- iv. scientific and social goal;
- v. basic data on capacity and financial assurance of the task;
- vi. institutions whose requirements are satisfied by the task;
- vii. international cooperation;
- viii. stages of the task (set of results whose attainment is being planned within a given year of solution or the form of the output in its influence upon social practice; for example, the final report, the expert opinion, the laboratory records, the automatic data processing technology program, a functioning model or an experimental installation);
- ix. internal breakdown of the task (fractional tasks).

In addition to a substantive portion, which includes the program regarding negotiations for purchase or sale of licenses and the handing over and acceptance of scientific-technical findings, the plan for science and technology development also contains an assurance component. This presents an overview of the coverage of the requirements of research and development base organizations which are directly managed by central organs, of research-production units and scientific-production associations and of nonindependent work sites, of the financial coverage of the tasks involved in the state plan of development of science and technology and of several other tasks and activities of a scientific-technical character in the economic sphere and on the formation and utilization of proprietary resources of economic production units and enterprises, expended for technical development. However, it also deals with the education of scientific workers.

#### The System of Indicators Showing the Technical-Economic Level of Production and Products

The segment of the plan of industrial production and sales also lists selected indicators of production quality and the technical-economic levels of production processes, in addition to indicators of realizational outputs based on tasks in the plan of scientific and technical development (production of goods

through new technologies, newly solved products and specific products and technologies realized in accordance with results of tasks specified by the state plan of scientific and technical development) in accordance with methodology specified for the 8th Five-Year Plan.

The indicators of quality are documented by production:

- i. of products which are technically progressive (in respect to which the validity of verifying technical progressivity either exists or is anticipated);
- ii. which has undergone the obligatory evaluation by state and sector testing facilities;
- iii. of products in the first-quality category (with respect to which the validity of the decisions issued by the state or sector testing facility either exists or is anticipated);
- iv. of products of a high technical-economic level (technically progressive and categorized in the first-quality grade) and their delivery for export purposes.

Indicators of technical-economic level of production processes are specified on a differentiated basis by sectoral central organizations, taking into account the specifics of the production activity, and, on the basis of their directives, by economic production units in working out their proposals for the 8th Five-Year Plan in accordance with the methodology recommended for selection of:

1. indicators pertaining to significant aspects of production, that is to say, inputs to the production process (resource intensity, measurable consumption), the production base (effectivity of basic assets, efficiency and other parameters of the production facility) and outputs (technical-economic parameters of the products involved);
2. cumulative (value indicators based on savings of individual components of proprietary costs attained by increased technical-economic levels of production processes) and specific (natural) indicators (measurable consumption of raw materials, materials, fuels, energy, embodied labor and basic assets, the degree of mechanization, automation, robotization, the application of progressive technologies and automatic data processing technology, increases in the technical level of machine facilities and increases in the technical parameters of the new products involved).

In summary, it can be said that the following will be specified in the 8th Five-Year Plan of development of the national economy in support of basic tasks of scientific-technical development:

- i. state goal-oriented programs (economic goals, realizational tasks of technical development and assurance through the application of purposeful resources;



ii. state scientific-technical programs (technical-economic goals, state tasks of technical development and assurance through purposeful application of resources;

iii. other tasks involved in technical development;

iv. realizational outputs resulting from tasks of the state plan of technical development and their tie-ins to the other segments of the plan;

v. an increase in the production of products having a high technical-economic level;

vi. technical-economic indicators of the level of production in state and economic plans;

vii. an aggregation of financial, foreign exchange and other means to safeguard the tasks of the state plan for technical development, including the establishment of pilot operations and verification operations and selected activities on the part of the research and development base;

viii. standards for the formation of the fund of technical development.

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CZECHOSLOVAKIA

CONCENTRATE ON EXPORTS URGES MINISTER OF GENERAL ENGINEERING

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[Article by Eng Pavol Bahyl, CSSR Minister of General Engineering: "To Represent the Economy Well"]

[Text] The department of general engineering at present supplies more than 52 percent of total Czechoslovak engineering production. Of importance is its contribution of production technology to domestic capital construction and to securing needed foreign currency, as well as satisfying the needs of the domestic market for durable consumer goods. Incidental to this is the continuing, intensifying, and more effective development of international cooperation in production, with the USSR as well as with other socialist countries, and also with companies in advanced capitalist countries. We are developing and gradually introducing new methods of management and planning of work organization and remuneration. These are the main areas of interest to which we are giving our attention at the present time, and which we are working out for implementation at all levels of organization and management. There are many instances where we are not succeeding as well as we would like. That is why we are analyzing our method of management and our work and drawing conclusions, so that we can achieve all that is expected of us in exports.

The exports of our department to socialist countries have been conditioned for a long time by accepted international obligations stemming from the coordination of 5-year macroeconomic plans and defined more accurately by long-term trade agreements and yearly memoranda concerning exchange of products. The foundation are the concluded agreements on specialization and cooperation, whose content carries out the aims of socialist economic integration of CEMA countries. We are talking about relations which have been developing over a long period of time, basically unaffected by prosperity fluctuations, which are mutually beneficial for CSSR as well as partner countries. At the same time, the growth index of exports to socialist countries overall for the period of 1981 to 1984 reached the value of 1.32. Our export is directed mostly to the USSR, the largest customer for the products of our department. During the course of the Seventh 5-Year Plan its share of the export of general engineering products to socialist countries rose to 53 percent. We project that these dynamics will be maintained this year as well as during the next 5-year plan.

Through its deliveries, our department participates in a number of integrating actions, such as ensuring the implementation of the USSR Food Program, participating in the extraction of crude oil, gas and iron ore, the building of power generating systems, as well as the reconstruction and modernization of light industry plants in the USSR. For the USSR Food Program we supply agricultural machinery (sugarbeet cutters, implements for harvesting hops). For facilitating the transportation of agricultural products, we are supplying refrigerated trailers ALKA with tractors LIAZ. Also important are the deliveries of floating pumping stations for irrigation, forestry logging tractors and hydraulic transmissions including components for use in producing agricultural machinery in the USSR. These deliveries are made regularly and in conformance with time schedules agreed upon in contracts.

To increase the extraction of raw materials, natural gas and crude oil, we supply primarily trucks, mobile repair shops on specialized under-carriages adapted to difficult terrain conditions, also construction and earth moving machinery and metal working machinery for maintenance workshops.

On the basis of the agreement reached by vice-premiers comrades Rohlicek and Talyzin, our department entered into cooperation with the USSR light industry department concerning deliveries of technological equipment for the modernization and reconstruction of light industry plants. This concerns mainly textile machinery, machinery for the leather and footwear industry, including assembly lines for the manufacture of shoes. We are also using a higher form of delivery system in making these deliveries, i.e., including project certification and assembly in place. We have been successful in responding to the growing demands of the Soviet market, as well as to changes in the structure of its requirements. Our ideas about the export potential of engineering products are not yet fully realized. We need to do more work. The main categories of products which we shall supply to the USSR are trucks, textile machinery, construction and road building machinery, and machine tools.

As this report has shown, we have to give ever greater emphasis to the development of advanced engineering branches, such as automated work stations, robots and manipulators, and high efficiency flexible production systems, to effect a transition to automated production processes. The basic document which provides guidelines for achieving a higher level of cooperation with the USSR in the future is, for the department of general engineering among others, the Program of Long Range Economic and Research and Development Cooperation for the Period up to the Year 2000, which will determine for us specific areas of cooperation. Of those most important we can mention is cooperation in the automobile industry, in production of automated machinery, of agricultural machinery, of construction and road building machinery and in shipbuilding and manufacture of technical vessels.

We are cooperating with other socialist countries, for instance, in the production of tractors (Polish Peoples' Republic), trucks (Bulgarian Peoples' Republic), and the citrus fruit program (Cuba). In addition, we supply the Polish Peoples' Republic with textile and agricultural machinery, machine tool equipment, and durable consumer goods. To the German Democratic Republic

we supply textile machinery, machine tool equipment, tractors and agricultural machinery and public transport vehicles; to the Hungarian Peoples' Republic passenger cars, trucks and construction equipment. Since last year we have been successfully developing trade with the Chinese Peoples' Republic, where we export mostly trucks, textile machinery and tractors.

The structure of mutual deliveries is contributing to the development of the national economies of CEMA countries in the area of the capital construction of their manufacturing bases. Their scope and structure are concentrated in the above mentioned branches, where deliveries in a total volume of 155 billion Kcs f.o.b. will be realized in the Seventh 5-Year Plan. Thanks to the initiative and effort of workers and technicians in our enterprises, we can state that export commitments to socialist countries projected for the Seventh 5-Year Plan will be not only completed but surpassed. The structure of export projections for the Eighth and Ninth 5-Year Plans worked out by our department stems from the present structure, augmented by including advanced engineering branches, machinery and equipment which will assure a high efficiency of production.

Exports to non-socialist countries are influenced by a complicated situation. Since 1983, the developed capitalist countries have been implementing various discriminatory trade-political measures against the socialist countries. These measures were accompanied by economic downturns, which manifested themselves in the markets of non-socialist countries by declining marketing opportunities for products of our department which we traditionally supplied to these markets.

It is true, that not all of the enterprises and economic production units make products which are fully competitive with those of EEC manufactures or other advanced manufactures in the world. Nor can we be proud of the often lower reliability of the products and the inadequate service for them. This situation in the non-socialist markets was reflected also in worsened business opportunities for marketing some of our products in 1984. But in spite of this problem, we were able to implement a number of extraordinary measures last year, and in cooperation with the Federal Ministry of Foreign Trade fulfill the tasks of the state plan.

The main commodities of the department of general engineering exported to this area are passenger cars and trucks, tractors, agricultural technology, machine tool and forging equipment, textile machinery, ships, construction machinery, leather working machinery and printing presses, among consumer goods bicycles, refrigerators and freezers, electric appliances, small appliances and utensils, and sporting and hunting weapons.

Among the complete industrial plants, there are the integrated manufacturing units--workshops, service centers, assembly plants, spinning and weaving mills. The largest volume of exports in the wide range of products manufactured by the department of general engineering is registered by trucks. They represent about 19 percent of our total export to non-socialist countries. The Seventh 5-Year Plan enjoins us to export, in all, 19,554 Tatra, Liaz, Avia and V3S automobiles. We can realistically expect to fulfill that task,



since during the first 4 years of the Seventh 5-Year Plan we exported altogether 17,253 automobiles. The reputation of Czechoslovak automobiles on foreign markets is established by their technological level, that is by the degree of their utility value as compared with the competition. We pay constant attention to the sales activity particularly as concerns the innovative cars Tatra and Liaz, and at the same time are building a service network for them. Among the principal customers of trucks are Algeria, Nicaragua, Syria, Egypt and China.

Similarly, in the case of exports of passenger cars, which are another key branch of export to non-socialist countries, we have been successful in reaching the planned volume of exports. Thanks mostly to the successful improvements of the "Skoda" car, the goal--to export 224,000 passenger cars in the Seventh 5-Year Plan--will be met. Among the main importers of "Skoda" passenger cars during the past year were Great Britain, Holland, Denmark, Belgium, Finland, the German Socialist Republic and Canada.

As far as the export of tractors is concerned, which represents about 13 percent of the total exports of our department, we have been successful ever since 1982 in maintaining the export volumes called for in the projections for the Seventh 5-Year Plan. There persists, on a worldwide scale, a deep marketing crisis of overproduction with all its consequences, caused by financial problems resulting from low prices for agricultural products and high interest rates. For these reasons the planned volume of export of tractors in the Seventh 5-Year Plan will not be met.

In order to keep our present markets and gain new ones, our attention, jointly with the enterprise for foreign trade Motokov, is focused on increasing the technical level by gradual modernization and new types of "Horal" type tractors (including an orchard model) as well as by maintaining quality standards of manufactured products. In marketing, our attention is focused on linkage markets, that is, exports linked to the imports of consumer goods for the domestic market. In developing countries our attention is concentrated on creating prospective markets and on setting up assembly plants or partial manufacturing in countries where possibilities exist for counter-trade as a form of reimbursement for Czechoslovak deliveries. The greatest number of exports of tractors go to Iraq, Greece, Norway, Finland, Sweden and Great Britain.

Machine tool and forging machinery is a branch which, because of its volume (about 8 percent of total exports), belongs to key branches with a high export effectiveness. The structure of our production is concentrated on medium and heavy machinery. The trend in worldwide technological developments is toward producing ever more sophisticated manufacturing equipment, primarily numerically controlled machinery and complete machine tool centers. Considering the fact that our foreign partners request in the interest of integrated industrial parks that our machinery be equipped with control system of western manufacture, we shall concentrate our attention on cooperating with those firms who will equip Czechoslovak machinery with top-of-the-line systems. The competition in the category of universal machinery during the last several years has increased by a number of producers, such as Mexico, Egypt, Brazil,

India and Japan, which saturate these markets with cheaper products. Greatest customers of this commodity are Iran, Holland, Austria, Syria and Canada.

The overall situation in the market for textile machinery is characterized by a depression, which is considered to be the deepest one of the post-war era. To begin with, the expected export of complete textile industrial plants is not being achieved. Similarly, the sales of new and improved spinning, weaving and knitting machinery on new markets has not been bringing satisfactory results so far. Demand is for high technical level of textile machinery equipped with reliable electronics. Because of the expanding network of competing producers, it is becoming ever more difficult to keep and improve our position on the traditional markets in the USA, Argentina and certain European countries. In order to improve the situation, we have adopted a number of measures for the construction, production, servicing, marketing, as well as for testing selected types of machinery at home before exporting them. The greatest customers for our textile machinery in 1984 were Spain, Iran, the German Socialist Republic, France, Italy and India.

Although supplier-user relations between the economic production units and the supply and marketing department have not been established to the full extent of the assigned task, we assume that on the basis of measures adopted jointly with the Federal Ministry of Foreign Trade, export assignments of the department for this year will be met. When filling these orders, we are very much aware of the impact being made by inadequate orders and foreign prices obtainable for certain machinery commodities. This concerns mainly the export of textile and machine tool equipment and some products in the consumer goods category.

An important instrument for guaranteeing the implementation of export assignments and increasing the mutual coordination between production and foreign trade are the agreements of cooperation between economic production units and the supply and marketing department, and joint programs for ensuring the implementation of export assignments. In these documents we have worked out, apart from conceptual questions, measures for increasing the technological level of products, solving the requirements of customers for the outfitting of machinery and equipment, cutting down on delivery time, and for organization and performance of servicing.

During the past year, most of the products of our department showed no serious variation in quality. At the same time, we are very insistent on eliminating recurrent defects. We have been able to maintain the trend toward fewer losses caused by defective products and demands for refunds, this indicator declining last year to 0.92 percent of manufactured products, whereas in 1983 it stood at 0.93 and in 1981 at 1.01 percent. During this period we have increased also the percentage of products of high technical level, i.e., those which during mandatory evaluation in government tests received 1st degree quality rating, or were designated as technically advanced products. The share of products of high technical level increased in 1984 to 14.32 percent, whereas in 1983 it was 14.00 percent and in 1981 only 10.81 percent.

In spite of these unquestionably positive results, we have to keep reminding ourselves that concern about quality is a constant preoccupation, and therefore we cannot be satisfied with what we have achieved so far. The responsibility for consistent and effective management of production quality--as part of production management--is given to all managers of our department. The main role in this is played by an established and constantly intensified comprehensive system of quality management, based on the principle that each worker is responsible for the level of quality to the degree that he has participated in the manufacture of the product.

The problems of constantly improving quality and technical standards come to the fore particularly in the case of important export commodities. Of most concern are such products as the "Skoda" passenger cars from AZNP "Mlada Boleslav", tractors of the standard model "I" from "Agrozet zetor Brno", tractors of the standard model "II" from the "Martin" Heavy Machinery Plant, and trucks "Tatra-815". Defects which may appear in these products are dealt with at inter-departmental councils with the participation of representatives of foreign trade, manufacturers and main sub-suppliers. Progress charts adopted for solving the shortcomings are discussed at regular control days directly in the manufacturing plants.

We are giving equal attention to other commodities important to the volume of exports, such as construction and road building machinery, machine tool and forging equipment, machinery and equipment for the textile industry and leather working machinery. Of the durable consumer goods, important export items are electrical appliances, most of all vacuum cleaners, electric irons, refrigerators and freezers; lately we have begun to introduce also washing machines into the foreign markets.

Last year, the share of foreign refund claims amounted to 0.44 percent. In the first quarter of this years it amounted to 0.36 percent. The majority of claims comes from non-socialist countries. Last year their share amounted to 1.14 percent of exports to those areas. The share of claims made against products exported to socialist countries in 1984 amounted to 0.09 percent in the first quarter of this year.

The quality of specific products is regularly checked at the level of the manufacturing enterprises and economic production units with the appropriate evaluating organizations of foreign trade. At the level of our department we control the quality of export products semi-annually on a regular basis, according to information received from the Federal Ministry of Foreign Trade, focusing this activity operationally on leading commodities. One of the instruments for objective evaluation of the causes of poor quality is the departmental or branch quality inspection, which we always direct toward solving a specific quality problem that has arisen, and if necessary, as a preventive measure even at the start-up of difficult and critical manufacturing operations. During the time they have been in action, these branch and departmental quality inspections have proven themselves to be very useful and fully effective in eliminating quality defects.



To increase the attention to their responsibility for effective quality management on the part of industrial managers of manufacturing economic units, we introduced the indicator "making certain of carrying out the tasks of producing manufactured products of high technical standards" into the individual wage incentive system. Its application was extended also to other personnel on the basis of the departmental principles of economic stake of personnel in quality indicators, at all levels of management.

The main substance of the strategy for development during the Eighth 5-Year Plan must be an effective and multifaceted intensification of production and the acceleration of the transition of the national replacement process to an intensive type, answering the needs of our national economy and with the basic goal of increasing the competitive potential of our products. And precisely from this strategy stem the basic tasks for the whole improvement process, beginning with technological development to the utilization of new products and technologies. For example, in the next 5 years we shall be facing the task of reducing the demands of the manufacturing sector for fuel and energy by 15 percent while at the same time reducing the consumption of fuel and energy by users by 10 to 15 percent. We are asking that during that period the share of improvement programs, particularly in the case of products designated for export, be increased to 60 to 70 percent. One result of the improved quality and reliability is the demand for an increase of production of items with high technical standards by a minimum of 18 percent. We are concentrating our efforts and capacity on carrying out key government goal-oriented and research and development programs, and on selected production sectors. This concerns, for example, the State Goal-Oriented Program 04 Hydraulic Components and Systems, where the basic aim and task is not only to reach a higher technical level, but also to considerably increase the production of these advanced final assembly components. No less important is the automation of production processes using robots and manipulators, aimed at developing standardized models and designing robotized technological complexes and assembly lines.

The results of the State Research and Development Program 05 New Fuel Control Systems for Motorized Vehicles and Industrial Use and Their Accessories will be widely applied. We are talking about research and development of new gasoline and diesel engines having an optimal consumption of fuel, increasing the service life of engines, evaluating the possibilities of using new materials. The needs of agriculture and food processing are being taken care of by the State Research and Development Program 06 Selected Problems of Developing the Agriculture and Food Complex. In our department we concern ourselves mainly with increasing the reliability and service life of newly developing technology, increasing production output not only in soil cultivation but also in harvest and post-harvest work.

Of the specific key products introduced into production during the Eighth 5-Year Plan we can name, for instance, the new "Skoda" passenger car with its practical modifications, flexible buses, tractors of the standardized model "II" and "IV", and new mini-tractors. We shall introduce new types of standardized front, rotating and flexible loaders. To improve textile machinery, we are counting on introducing a new generation of machinery for



spindle-less spinning and weaving looms. An important item is unquestionably the machine tool and forging equipment. We shall gradually introduce into production single purpose machine tool equipment and automated assembly lines with specialized belts and application of numerically controlled technology, unattended machinery and workshop centers for rotating and non-rotating machine tool equipment, integrated robots and manipulators. In the case of forging machinery, we expect to introduce into production flexible production systems for plane and volume forging, as well as forging complexes with a high production output.

Not to be neglected is the production of durable consumer goods, where development is concentrated on removing unsatisfactory types (refrigerators, bicycles) from production, on accelerating the modernization of technical parameters of the products, and on introducing goods which do not yet appear on our markets. Under consideration, for example, are new types of washing machines, large-volume refrigerators, food processors, meat slicers and juice extractors, a one-man power saw, and a number of products for use by gardeners and vacation home owners (new mini-tractor "Agro-Mini MT" and "Uni MT" with many accessories, a line of electric tools "Vari MT").

One of the means of making certain of carrying out all these tasks has to be a substantial acceleration in the use of electronics, a broader and more effective integration into the international division of labor, particularly into the CEMA framework and most of all with the Soviet Union, and a more extensive use of licencing policies in cases where development of appropriate technology would not be practical given our capacities. We assume, naturally, that technological improvement will help us place our products on foreign markets.

I have discussed the main areas where we are adopting measures for comprehensive solutions of our foreign relations problems. We must not only work out all these measures in detail, but most of all resolutely put them in effect. Only thus can we keep pace with world trends and succeed on the demanding foreign markets. For our products must represent Czechoslovak engineering and Czechoslovak economy well. And that is our number one task.

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CZECHOSLOVAKIA

ECONOMIC MECHANISM FOR INTENSIVE DEVELOPMENT VIEWED

Prague HOSPODARSKE NOVINY in Czech No 32, 1985 p 3

[Article by Eng Miroslav Toms, Doctor of Science, Deputy Director of the Economic Institute of the Czechoslovak Academy of Sciences]

[Text] In June the publishing enterprise SVOBODA published a book called "System of Planned Management, Effectiveness and Intensification of the Czechoslovak Economy (Problems of Theory)"--260 pp, Kcs 26.00 bound; it is a work of an authors' collective headed by Jiri Dvorak. The substance of the book is clearly indicated in its title. The work unquestionably represents a significant contribution to the current discussions on formulating a strategy for the development of the Czechoslovak economy and an overall improvement for managing the public sector. Its obvious attribute is its synthesizing character--the authors critically integrate the results of individual research projects in the comparatively large theoretical literature, confronting them with the generalization of practical experiences of the economic policies of socialist countries.

The second basic attribute of this publication rests in the fact that, contrary to most of the social science literature, it is intentionally written in a controversial manner. The authors not only are not evading controversial problems, on the contrary, they are trying to formulate them clearly and analyze the premises and consequences of alternative approaches, particularly in the area of improving the economic mechanism. The book thus contains a strong inspirational charge for economic practice as well as for the development and further direction of the social sciences. A publication of this kind presents an opportunity to contemplate some of the more typical questions, or rather the propositions contained in the work, which can be considered as the most important or of most interest.

The Concept of Improving Planned Management

The book offers, above all, a competent discussion of various suggestions for a way to achieve desirable changes in the economic mechanism. Attention is given mainly to the consideration of the concept of a "freer" interpretation of the plan, which the authors for the sake of brevity call a concept of pure profit. According to it, the activities of enterprises are basically influenced by the center only through indirect, generally valid instruments of management (prices, levies, credit policies, sanctions, etc.), while

directly assigned tasks are used only as an exception. Even though the authors themselves state that "a characteristic trait of the development of all socialist economies is a tendency toward an increased role of indirect instruments of management," the importance of which has not been appreciated for a long time, they come to the conclusion, in my opinion a correct one, that in a number of approaches "this tendency has become absolute, with the aim of managing the economic enterprise sphere basically by means of indirect instruments of management only, or rather by using specifically directed management instruments only as an exception. We do not consider such opinions to be substantiated" (p 187).

The problem is discussed from two positions. First, as an analysis of the inner substance of the concept itself as an abstract theoretical system (degree of its inner logic), secondly as an analysis of the degree of its realism, that is, the possibility of realizing its premises and conditions, which is essential if the desired functioning of this system is to be achieved. It is not the goal or within the scope of this article to recapitulate this analysis and to judge or evaluate all its arguments.

Generally it has to be said that the work offers a very erudite, broadly based analysis, which systematizes the degree of theoretical understanding, generalizes the problems and experiences from the economic-political viewpoint, and in its resolution persuasively argues its stated position. That does not mean that certain aspects of the analysis cannot be challenged, or that one cannot question the completeness of the number of arguments, problems or questions presented. In the given context, the basic consideration is the fact that, in its synthesis of exposition, depth of execution and necessary level of insight into the problems, the work accurately introduces an important new approach into the contemporary Marxist literature of socialist countries.

Another contributing factor of this publication is that in its totality it reflects the theoretical-practical synthesis of a concept of improving the economic mechanism as appropriate to the character of socialist production relations during the stage of building developed socialism. Its formulation, linked in a constructively critical way to current economic practices, stems from the determinant role of the central plan and a broad participation of the working people in management, from a more organic synthesis of direct and indirect instruments of management in a more comprehensively understood, demanding socio-economic environment, which inherently includes the growing role of the subjective factor as an expression of the new character of the dialectic of the object and subject in the current stage. The theoretical function of the synthesis of value and natural criteria (optimization of the economic value of the mechanism) exists for the time being in an embryonic stage and is being developed in individual research projects.

The book before us represents a valuable contribution to this effort, and at the same time is an attempt to achieve a more complete exposition and dissemination of the results of research in recent years. Beside that, the work also contains some original results of scholarly efforts by the authors' collective. At this point we should mention at least two of them.

A new factor in the analysis of the role of technological progress in intensive development (Chapter 3) is the development of the theory of innovative processes, which stems from three streams of technological revolution and makes possible the formulation of a realistic concept of intensification. Here an observation is drawn from the theoretical analysis, which in the meantime has become a component of directives for practice, that "created national income can continue to grow only by obtaining higher value from production consumption, by its expansion throughout the total national product, therefore to the detriment of production consumption, and given a situation where slower growth of the total national product is overtaken by the growth of created national income.... These are the basic macroeconomic traits of an intensive type of development of the Czechoslovak economy. Any other successful development of the national economy--in the 80s or in successive years is not possible." (p 97) These macroeconomic links are then further carried over to the requirements for the necessary character of structural changes of the national economy in its intensive development.

### Approaches to Technology of Planning

The second important attribute of the publication is the position of the authors that the core of the economic mechanism is central planning and a need for its continuing improvement. This fact is important, because a number of economists (not only here but also in other socialist countries) have been arriving at the conclusion, based on a one-sided criticism of the shortcomings occurring in practice, that it is necessary to minimize the use of instruments of direct management and make indirect management dominant, and thus in reality weaken the directives of central planning.

Such one-sided criticisms of central planning often simplistically identify planning with one of its forms of application, and do not see the broad possibilities of improving it. The main argument is that direct management necessarily requires a massive amount of detailed information about conditions of production and consumption of individual products, which the center cannot obtain other than by a constant input of information from the enterprises. Given such conditions, it is maintained, the higher agencies are totally dependent only on information supplied by subordinate units, which, however, have no interest in their objectivity. From this it is further deduced that on the basis of the traditional concept of the plan specifications, it is not possible to solve the problem of the so-called cover up of unused resources or to increase effectiveness.

It has to be said that these arguments are in no way new. The conflict of interest between the need for disclosure of "full information about all products" in the central, and resulting actual predominance through information by the khozraschet sphere, has always been the source of criticism of central planning. A similar argument, for example, was developed already in the 30s by Friedrich Hayek. The resolution of this problem has not been helped very much even by the complicated "fine-tuning" schemes of the so-called planning procedures which have been developed in the econo-mathematical literature of the world during the past decade. Even this theoretical approach to creating the plan accepts without a second look the key concept



under discussion, and develops just those procedures of a dialogue between the center and lower components of management, during the course of which the center should be gaining a huge amount of information about all individual products, needs, technologies, etc., in order to construct an effective plan.

In this context, the position of the authors that fulfilling the conditions of the above approach is not essential, merits extraordinary consideration....

The work points out that the specifications of the state plan need not be understood in this manner. "The point of departure for the techno-economic rationalization of the plan is not, in our opinion, information about micro-quantities and microproductions existing in individual khozraschet units, but objectively rationalized normatives of the final effect which should be obtained from a unit of a resource (while observing certain limits, specifically assigned tasks in a naturally applicable realization, etc.).... Understood in this way, the higher unit is not at all dependent only on accepting information from the khozraschet units, but is able to make its own calculations based on comparing effects and resources, able to formulate analytic-comparative approaches (it is well known, for example, that in many instances enterprises which work under very similar technical and economic conditions show considerably different, sometimes even diametrically opposed, results), are able to make international comparisons, use information gleaned from foreign trade enterprises, etc."

This idea of the technology of creating the plan can be taken as a current renaissance of the method of constructing the plan, where planning agencies do not limit themselves exclusively to the information data from local units, but secure information also by other means. The planned determination of standards for the effectiveness of resources should be combined with specifically directed designation of the dynamics of the technological level of key products and volumes of utility values, which are of determining importance to the so-called great balance of the economy, technological development, etc.

This method of carrying out the plan has nothing to do with tendencies toward managing it or an excess of indicators. At the same time, it could help overcome the sometimes applied mechanical approach to planning by a method of linear extrapolation (indexing method) of universal value indicators, which is not always based on the optimization of effects and expenditures relative to concrete utility values.

#### Organizational Structure of Management

It is obvious that the above concept will have other consequences--it would require also "changes in the substance and method of work by the ministries which manage the manufacturing branches. They would have to base their actions more fully on the knowledge and analysis of technical parameters of the key products and be able to set realistic and highly progressive assignments accordingly.... The evaluation of the work of the ministries should be made not only on the basis of fulfilling the plan for universal value indicators by the branches, but minimally, also with equal importance, firstly according to the dynamics of technical effectiveness, secondly

according to the level of technical parameters of main end products of the branches, thirdly according to whether the pertinent products attain the khozraschet results in harmony with satisfying society-wide needs within the structure of the utility values. At the same time the question arises whether today the concept of work and evaluation of the activities of the ministries are not too closely linked with the plan fulfillment of their subordinate units and enterprises, which leads to an unhealthy "identity" of interests.... The standing and evaluation of the work of the ministries should be more meaningfully constituted as a unit of society-wide management, which is interested not only in fulfilling the plan of the branch, but most of all in that fulfillment of the plan by subordinate units is not achieved in conflict with macroeconomic effectiveness." (pp 193-194)

The work further argues for the conclusion that in the current stage the inter-branch aspect of the replacement process is being vigorously enforced, which satisfies the requirement for strengthening a free, inter-branch and inter-departmental character of management. In this connection the authors dispute those suggestions which recommend extending the khozraschet principle even to the branch ministries. "The identification of the interests of the ministries with those of the enterprise economic sphere on a khozraschet basis would further strengthen the tendency toward a departmental approach, which is one of the main problems of central planning." (p 227)

The questions enumerated above do not, of course, exhaust the number of questions dealt with in the publication. A reader will find here a substantive analysis of new demands placed on managers in the transition period to intensified development. The publication rises above a narrow "economist's" understanding of the extent of necessary changes in the system of management. It places the problems into the overall context of characteristic traits of a developed socialist society, and the exposition ends by addressing the question of increasing the role of the working people in management in the framework of a socialist economy.

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CZECHOSLOVAKIA

EFFICIENCY OF STATE FARM AGRICULTURAL ASSETS DISCUSSED

Prague KONTROLA in Czech No 6, 1985 pp 2-6

[Article by Eng Jiri Rehak, CSSR People's Control Commission: "Objectives of Inspections of the Efficiency of Asset Utilization in Agricultural Production on State Farms"]

[Text] The state agricultural sector, which includes centrally managed organizations and state farms, manages 2.089 million hectares of agricultural land (hereafter z.p.) in the CSSR, or 31.4 percent of the nation's agricultural land. For this reason the sophistication of state farm management, since these entities control most of the land in the state sector, has a significant impact on the overall intensity and efficiency of Czechoslovak agriculture.

As matters stand now however, the performance of state farms has not been satisfactory. If the level of gross agricultural production per hectare of z.p. on state farms is taken as 100 percent, then the cooperative sector outperformed the state farms in the Sixth and Seventh Five Year Plans by more than 20 percent nationwide (30 percent in the CSR and more than 10 percent in the SSR). The lag is greatest in the area of plant production, where the cooperative sector is currently outperforming the state farms by 35-41 percent nationwide (42-50 percent in the CSR and 23-27 percent in the SSR). In livestock production the figure is 14-17 percent greater, but with a higher percentage of procured fodder on state farms.

These differences have not changed much in recent years. This has meant that despite an increase in total agricultural output the relative backwardness of state farms has not decreased. There are both objective and subjective reasons for this backwardness.

The objective reasons for the above differences include a lower quality soil stock, the location of a relatively high percentage of state farms in less densely populated areas with inferior social, health care, schooling and cultural facilities, the fact that a large number of state farms are located in areas with inferior ecological conditions and, last but not least, the fact that in the past a number of poorly managed united agricultural cooperatives [JZD] with poor soil resources have been reclassified from cooperatives to state farms.

The cooperative sector has greater amounts of soil in relatively better production environments. While state farms control 24.6 percent of the total agricultural land managed by state farms and JZD, they control only 16.3 percent of the land in corn producing areas, 18 percent of the land in beet producing areas, but 32.8 percent of the land in potato-oat regions and 44.3 percent of the land in mountain regions. In addition, the quality of the land in comparable regions is poorer on state farms, in the sense that in most regions the percentage of cultivated land is higher for JZD. The results of an evaluation of the quality of the soil stock indicated that the productive efficiency of state farm land in the CSR is lower than that of the cooperative sector by 13.5 percent, and in the SSR by 7.1 percent.

State farms have a smaller work force and differences in this area are not decreasing. The cooperative sector has an average of 33 percent more workers per 1,000 hectares of z.p., though the figures differ by area; in the corn producing areas of the SSR the difference is only 13.5 percent, but in the mountain regions of the CSR it is 64.6 percent, and in the potato-oat regions of the SSR 42.7 percent.

The state farms have a less favorable structure of production, they produce a lower percentage of intensive crops, which influences their revenues (for instance they raise substantially fewer vegetables). They also raise a lesser amount of root crops, which can improve soil fertility if planted regularly. In the beet growing areas of the CSR and SSR the JZD plant 29 and 30 percent more sugar beets respectively than the state farms in the same regions, and in the corn growing regions of the SSR JZD plant 93 percent more sugar beets than the state farms. JZD plant 107 percent more potatoes than state farms in the potato growing regions of the CSR, 78 percent more in the potato-oat regions, and 87.9 percent more in the mountain regions. Of the important crops state farms produce only oil plants in greater amounts than JZD, in part because these crops require less human work. They also raise more fodder crops. Their extensive cultivation of annual fodder crops, especially mixed crops, is an undesirable phenomenon because it produces the least amount of nutrients per hectare (with the exception of silage corn). Likewise, this greater percentage of perennial fodder crops contains greater amounts of extensive perennial grasses and clover grasses instead of pure and intensive stands of clovers. These are the main reasons that the yields of annual grasses in specific production areas of the CSR are 8.8-14.2 percent higher in the cooperative sector at JZD, and 3-30 percent higher in the SSR.

The state farms have a higher percentage of their land in fodder crops even though their cattle density is less than on JZD (especially in the CSR, while both sectors have low density in the SSR). In the CSR the inappropriateness of this production structure is evident from the fact that because of poorer conditions differences in cattle densities are currently increasing more rapidly on JZD than on state farms.

State farms are better equipped with capital assets; still, their stock of machinery and equipment exceeds the capital stock of JZD by only 2 percent in the CSR and 9 percent in the SSR. Most of the capital assets of state farms



consist of obsolete and often inefficient buildings which are often not very well suited to the purposes of agricultural mass production. Because of the low employment levels at state farms the value of capital assets per employee is about 50 percent higher there than at JZD, and machinery per employee some 33 percent higher than that of JZD in the CSR and 43 percent higher than at JZD in the SSR.

In intensity of agricultural production, as mentioned earlier state farms have been recording on the average worse results than JZD. These differences do not stem only from differences in the production efficiency of soils, but also exist under roughly comparable natural conditions, as shown in Table 1.

Selected samples point in certain cases (with annual fluctuations) to trends towards stagnation, while others show increases in or a moderation of differences. In wheat yields, for instance, state farms in the beet producing areas of the CSR are clearly falling further behind, as well as in the most productive areas of the SSR. For root crops the differences are tending to decline, but this is mainly due to a nationwide levelling off in the cultivation of these crops.

A lag in milk production levels is most evident in the potato-producing regions of the CSR and in the most productive areas of the SSR. In terms of increases in feedlot cattle, state farms are lagging behind in all areas of the CSR by 0.5-17.7 percent, and in the SSR by 1.8-31.2 percent. Because of differing commercial productivity and herd size, meat production per hectare of z.p. varies, tending to be higher in JZD with the exception of the potato and especially the mountain regions of the SSR where there are large herds and consequently high production of pork and poultry. Similarly, milk production per hectare of z.p. is highest in the cooperative sector of the CSR; this is not the case in the SSR where herds of milk cows tend to be higher on state farms but per head milk production levels higher on JZD.

Differing management results come in part from differing percentages of nonagricultural activities, which are more fully developed at JZD. The agricultural labor force is insufficiently utilized especially in areas with poor weather conditions and where the period of vegetative dormancy is longer. The additional activities of state farms operating under these conditions amounted to only 40 percent of the level of associated production at JZD in the CSR and 50 percent of that in the SSR.

Differing production intensities and cost structures have an impact on efficiency. For instance, JZD in the CSR produce 38.8 percent more gross plant production from a given amount of applied artificial fertilizer than state farms. This figure is 20.2 percent in the SSR.

Table 1.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ukazatel	Výrobní oblast	1977			1983		
		statky	JZD	index	statky	JZD	index
a	b	1	2	3	4	5	6
Výnos pšenice t/ha (9)	CSR VO 2	3,94	4,37	110,9	4,73	5,48	115,1
	VO 3	3,44	3,88	112,2	3,34	4,74	109,2
	VO 4	3,20	3,54	110,6	4,14	4,35	105,1
	VO 5	2,89	3,02	104,5	3,99	3,87	97,0
	SSR VO 1	4,41	4,70	106,8	4,92	5,33	108,3
	VO 2	3,60	3,69	102,5	4,03	4,78	118,1
	VO 3	3,40	3,43	100,9	4,41	4,12	93,4
	VO 4	3,42	3,49	102,0	4,01	4,21	105,0
	VO 5	3,97	4,30	108,3	3,72	3,85	103,5
	(10)						
Výnos cukrovky t/ha	CSR VO 2	38,91	42,33	108,8	27,17	29,78	109,8
	VO 3	38,09	38,42	108,5	26,23	30,74	117,2
	SSR VO 1	31,87	31,81	99,8	28,79	29,33	101,9
	VO 2	24,49	30,53	124,7	27,98	28,33	101,3
	VO 3	30,58	32,59	106,8	27,99	25,74	92,0
Roční dojivost v lt (11)	CSR VO 2	2 705	3 078	113,7	3 171	3 596	113,4
	VO 3	2 786	2 898	104,7	3 254	3 474	107,1
	VO 4	2 892	2 947	109,5	3 167	3 455	109,1
	VO 5	2 855	3 060	107,2	3 277	3 571	109,0
	SSR VO 1	3 100	3 141	101,3	3 384	3 504	104,2
	VO 2	2 808	2 905	103,5	2 884	3 290	114,0
	VO 3	2 635	2 738	103,9	3 025	3 024	100,0
	VO 4	2 666	2 654	99,5	2 922	3 015	103,2
	VO 5	2 537	2 588	101,9	2 688	2 757	103,4

- Key: 1. Indicator  
 2. production area  
 3. state farms  
 4. JZD  
 5. index  
 6. state farms  
 7. JZD  
 8. index  
 9. wheat yield, tons per hectare  
 10. sugar beet yield, tons per hectare  
 11. annual milk yield, liters

- VO 1 - corn producing area  
 VO 2 - beet producing area  
 VO 3 - potato producing area  
 VO 4 - potato-oat producing area  
 VO 5 - mountain producing area

note: VO 1 not listed for the CSR, because it contains only 1 state farm

Differences in investment per hectare of z.p. at state farms and JZD (it is higher at JZD) are not adequately reflected in production intensity or in outputs (differences in outputs are greater than differences in costs, and these differences are still greater in adjusted value added in favor of the JZD). For this reason state farms operate with higher cost figures per Kcs 100 of output than JZD and therefore achieve lower profitability levels and return on investment figures. The investment efficiency of JZD is greater than at state farms... State farms up to 1981 almost always operated at a loss (especially in the SSR). This operating deficit was always made up from state resources. After approval of the Principles of an Improved Planned Management System for Agriculture Starting in 1982 there was an increase in

subsidies to agriculture of Kcs 2.9 billion, almost half of which was earmarked for state farms. This caused a turnabout in their management in the sense that state farms in the CSR had Kcs 1,050 in profits per hectare of z.p. in 1982 and 1,529 Kcs per hectare of z.p. in 1983. The comparable figures for the SSR were Kcs 492 and Kcs 836. This strengthened the khozraschot operations of the state farms, but has not as yet been fully integrated into a more rapid pace of development compared with the cooperative sector, meaning that economic mechanisms have not as yet done anything to reduce state farm backwardness.

As a result of the foregoing, the structure of overall subsidies to state farms has changed. The percentage of total revenues derived from agriculture, including procurement price supports, has declined in the CSR from 74.5 percent to 70.6 percent, and in the SSR from 72 to 67.5 percent. On the other hand differential payments as a percentage of the total have increased in the CSR from 17.9 to 23 percent and in the SSR from 18 to 23.6 percent. For JZD agricultural revenues have declined in the CSR from 94.2 percent of the total to 93.9 percent, while in the SSR the decline has been from 84.5 to 81.4 percent.

This analysis implies the existence of significant underutilized capacity in the intensity and managerial efficiency of state farms. Not all of these are exploitable because some of these differences are caused by differing production conditions. A substantial portion of this capacity however, is mobilizable because there are also differences in the management of cooperatives and state farms under roughly comparable conditions, as well as among state farms themselves. Table 2 (see next page) presents some examples from selected state farms.

It is evident that inferior conditions in either work force availability or equipment stock are not always the reasons for poor performance. Some state farms do not lag behind the norm totally, but only, say in plant production, while others lag behind in livestock production. Their economics is influenced by the amount of differential payments. All of the most poorly managed state farms have higher or identical rates of differential payments per Kcs 100 of revenues for selected products, with absolute figures dependent on the intensity of marketable production (differential payments are a component of outputs). Despite these advantages the extensive character of production makes costs a larger percentage of outputs for lagging state farms. These state farms are also the recipients of intensification supplements to help overcome their backwardness.

The development of state farms will also be an important aspect of their evaluation. It is important to determine whether a given farm is developing more or less rapidly than the average, or if it is stagnating. Our inspection efforts for this reason will be directed at state farms which have consistently lagged behind national norms and those that have experienced a deterioration in their positions, in order to ascertain the reasons for this. We will also direct our attention at the better state farms and the conditions which have fostered this type of development as well. More precise choices of exactly which state farms will be evaluated will be made during preparations for the inspection.

Table 2. Comparison of Selected Indicators of Certain State Farms.

(1)	(2)	(3)	(4)	(5)	(6)			(10)	(11)	(12)	(13)	(14)
Klasifikace	Název státních statků, okres	Pracovní síly na 1000 ha	Stroje a zaří- zení v Kčs na ha z. p.	Hrubá zemědě- lská produkce Kčs/ha z. p.	Hektarové výnosy t/ha			Roční dojitost v lt	Náklady na 100 Kčs výkonů	Zisk v Kčs/ha z. p.	Diferenciální přípl. Kčs/ha z. p.	Intenzifikační přípl. Kčs/ha z. p.
					(7)	(8)	(9)					
a	b	1	2	3	4	5	6	7	8	9	10	11
+	Brožany (LT)	151	17 081	17 798	5,0	—	36,6 <sup>1</sup>	3 918	92,17	2 248	621	0
—	Snědovice (LT)	84	10 161	11 274	4,1	—	33,3 <sup>2</sup>	2 919	107,32	1 695	2 553	088
—	Veltrusy (ME)	122	11 295	12 255	4,1	—	22,7 <sup>3</sup>	2 597	120,11	—1 251	1 492	1 741
—	Kladno (KL)	122	12 458	12 458	4,2	—	23,4 <sup>2</sup>	2 724	116,17	—201	2 253	2 044
—	Postoloprty (LN)	140	17 593	13 449	4,3	—	28,1 <sup>2</sup>	2 499	108,66	471	1 874	1 402
—	Jičín (JC)	153	15 407	15 452	4,2	—	25,3 <sup>2</sup>	3 828	110,98	621	2 515	3 171
+	Střelitz (SU)	117	9 997	10 482	3,8	—	18,3 <sup>1</sup>	3 304	116,50	4 135	6 616	0
—	St. Město p. Sn. (SU)	123	8 507	7 925	1,9	—	13,4 <sup>1</sup>	2 770	132,94	1 221	7 982	1 982
+	Králov Brod (GA)	155	9 988	25 253	5,1	5,9	53,5 <sup>2</sup>	3 673	85,20	5 388	1 628	0
+	Gabčíkovo (DS)	141	11 582	23 680	6,4	6,0	46,4 <sup>2</sup>	4 081	82,85	4 322	0	0
—	Galanta (GA)	137	8 387	16 752	5,2	4,7	29,2 <sup>2</sup>	3 278	105,24	1 843	2 749	456
—	Stárovo (NZ)	125	9 632	11 522	4,4	3,8	15,3 <sup>2</sup>	2 567	100,50	1 818	1 892	274
—	Zeliezovce (LV)	147	9 629	14 020	4,7	4,7	28,6 <sup>2</sup>	2 657	105,80	1 175	2 157	289
+	Lipt. Mikuláš (LM)	142	11 089	13 624	9,7	—	19,4 <sup>1</sup>	2 699	118,32	2 005	5 115	0
—	Martin (MA)	115	9 977	10 000	3,6	—	15,3 <sup>1</sup>	2 523	154,95	877	5 372	232
+	Moldava (KS)	123	8 230	13 413	8,7	5,3	—	3 424	121,77	1 420	4 612	0
—	Třebíšov (IV)	128	9 930	10 282	3,3	3,2	—	2 628	144,40	—971	3 266	1 475

- Key: 1. classification 8. grain corn  
 2. name of state farm, okres 9. root crops  
 3. labor force per 1,000 hectares 10. annual milk yield in liters  
 4. machinery and equipment per hectare of z.p. (in Kčs) 11. costs per Kčs 100 of output  
 5. gross agricultural production per hectare of z.p. (in Kčs) 12. profit in Kčs per hectare of z.p.  
 6. yields in tons per hectare 13. differential payments in Kčs per hectare of z.p.  
 7. wheat 14. intensification payments in Kčs per hectare of z.p.

Party and government agencies are devoting ongoing attention to the development of state farms. At the CPCZ Central Committee Plenum in October 1975 the Main Directions in the Future Development of State Farms were finalized and subsequently approved by the CPCZ Central Committee Presidium and the Presidium of the Government of the CSSR. These guidelines define the structure of production at state farms in specific production regions, the objectives for increasing concentration, improving specialization and the development of cooperative relationships; they furthermore outline strategies for improving internal enterprise management and economics, improving their planned management, organization, management above the enterprise level, and the principles for intensifying the work of state farm personnel. This basic document was then broken down along management lines and its implementation gradually negotiated, along with the adoption of additional systemic measures to improve state farm management in the Seventh 5-Year Plan.



After discussing the report of the CSSR People's Control Commission concerning the results of the study of the reasons for differences in the management of agricultural enterprises operating under comparable natural conditions the CSSR Government Presidium adopted Resolution No 256/1980, which was implemented at the republic level by SSR Government Resolution No 256/1980 and by the minutes of the proceedings of the CSR Government from 26 November 1980. This resolution directed the concerned enterprises and agencies to develop, in cooperation with middle management, a program for intensifying production at backward enterprises with the objective of increasing the intensity of production at least to the level of average enterprises. These intensification programs were formulated at most state farms. Both of the above documents, therefore, and their reworking at specific enterprises will be an important set of documents on which the inspection of state farms will be based.

For this inspection of state farms to produce concrete results it must be comprehensive and focused on the critical reasons for low productivity and backwardness. At the level of the agricultural enterprises, then, it will be directed specifically at the following groups of problems.

**Reasons for Low Levels of Plant Production.** The fundamental consideration here is the utilization of the agricultural soil stock available to the enterprise. It will be necessary to verify how well the plan for gradually bringing all plots into intensive cultivation has been formulated. The procedures for reclamation, liming, manuring and the production and application of compost will be examined. The degree to which the structure of plant production makes optimal use of soil and climatic conditions will also be looked at. The link between plant and livestock production will be determined, with recommendations made to minimize the use of arable land and maximize the use of stands of permanent grass for livestock raising purposes. The inspectors will determine how well the soil stock of the enterprise is being utilized (the spatial concentration of blocks and plots), whether seeding procedures are efficiently organized and how well procedures are complied with. The precision with which agrotechnical procedures are adhered to and how well intensification factors in plant production are being exploited will also be determined. Specific procedures that will be examined include the application of artificial fertilizers and chemical protective agents in conjunction with agrotechnical soil analyses, analyses of plants and correct reactions to the appearance of diseases and pests, the use of resistant strains, and the proper use of the many strains available.

**Reasons for Low Livestock Production.** The most important factor to consider here is whether the fodder base is adequate in terms of quantity and quality. For cattle what is important is the production efficiency of bulk fodders. A simple way to derive this is from concentrated fodder consumption per unit of production (milk, or weight gains of animals). The commercial productivity of cattle must be determined in aggregate because a number of state farms obtain fine milk production results but low weight gains (because per head milk yield and the amount of fodder per unit of milk production are the important considerations). The amount of fodder produced is determined from internal enterprise documents, while its quality is evaluated by laboratory analyses of silage, hay silage and straw made by oblast agricultural labs or

other labs. It will be imperative to utilize the results obtained by centers for the managed nutrition of cattle which are operative in all okreses, as subdivisions of selected agrochemical enterprises. These centers analyze bulk fodders and, on the basis of their findings recommend ways to increase its quality (ammoniating, adjusting acidity, etc.) and to optimize fodder rations; the implementation of their recommendations needs to be followed up on.

Commercial productivity is greatly influenced by the level of compliance with basic zootechnical and husbandry conditions and by the level of hygiene. It is improved by the availability of proper housing facilities and equipment and by the effectiveness with which the veterinary and breeding services operate.

It is necessary to determine the reasons for low commercial productivity in terms of the foregoing problem areas and in particular to account for deviations from consumption standards for concentrated fodders and low efficiency of bulk fodders.

Reasons for Low Input Effectiveness. On the one hand this results from the extensive character of most plant and livestock production, and on the other hand it is the outcome of the level at which production is equipped with capital assets, a work force, and an organizational and management structure, as well as by how well economic incentives for increasing intensity and production efficiency have been devised and implemented.

The level of availability of production assets is determined by the size of the machinery stock, its structure, its adaptability to use in lines, its age (it is useful to compare these figures with those for a kraj or okres as a whole), and the frequency with which this machinery is fully operational (this involves the organization of equipment storage, daily maintenance, scheduled, major and general overhauls, post seasonal repairs, the use of diagnostic equipment, the fulfillment of the plan for constructing maintenance facilities, the participation of state tractor stations in these construction projects, and the level to which state farm demand for repair work is being fulfilled). A similar approach will be used to evaluate the degree to which the livestock industry has been provided with housing facilities and equipment for livestock production.

A useful measure of efficiency is the ratio of production to the value of the capital stock and material costs (or total costs); for plant production a comparable figure is the ratio of gross production to the value of applied artificial fertilizers.

The level of labor force assurance is given by number of employees per 1,000 hectares of z.p. (in comparison with the average for an okres or kraj). It is necessary to determine a minimal structure for the work force (percentage of technico-managerial workers and others), and a qualification and age structure for managerial and other employees. Reasons for fluctuations in the work force must be ascertained (making use of the findings of the commissions on fluctuation). The efficiency of the plan for cadre and personnel work and the effectiveness of measures in the area of social

development and work force stabilization, and in particular the assurance of the necessary housing construction, the setting up of pre-school centers, health care centers, cafeterias, public health facilities, the setting up of safety systems at workplaces including the provision of the necessary handbooks all must be determined. Also of interest is the utilization level of the labor force stabilizational fund, oblast contributions, and other sources of funds. Proper ground rules for compensation must be set up (to be discussed further on.)

**Organizational Efficiency, Management and Controls.** It makes sense to determine the level of sophistication of enterprise organizational norms (organizational, labor regulations, the chain of command, and other items) and to compare them with recommended models of the ministries of agriculture and food [hereafter MZVz], and the extent to which they have been implemented. The degree of efficiency of the organizational structure of units and divisions within enterprises will be studied and compared with model organizational schemes for state farms. Note will be taken of the extent to which responsibilities have been assigned to specific organizational units and divisions within the organizational standards. This concerns particularly relationships of subordination, supervision, objectives, authority and responsibilities. Also important is the extent to which relationships of khozraschot cooperation have been defined between organizational units in the managerial code (especially regulations governing the transfer of products, labor and services among centers). The degree of congruence must be determined between the list of functions and the functional categorization of technico-managerial employees into classes and the current wage and salary catalog, as well as feasibility of employees currently at lower technico-economic employment classifications managing effectively the subordinates currently under their authority. Job descriptions for all technico-managerial employees will be reviewed to assure that responsibilities are clearly defined. The quality of the internal control system will be checked as well as the effectiveness of controls on the implementation of newly adopted measures, and the timeliness of dealing with shortcomings following inspections conducted by controlling and expert divisions.

**Efficiency of Economic Structure and Definition of Khozraschot relationships.** This involves determining whether khozraschot divisions at a given level that are supposed to be operating independently actually have the necessary production assets, work force and authority to carry out the tasks entrusted to them by internal enterprise economic regulations. Also of interest is whether and if so how collective (team) forms of work organization and compensation and team khozraschot have been implemented.

**Efficiency of Internal Enterprise Planning and Value Relations.** This concerns the way that plan tasks are broken down for specific khozraschot divisions, the objectivity of and worker participation in formulating a plan, the level of detail in a plan breakdown in terms of the potential for internal enterprise divisions to have an impact on performance. Also of concern is the technique for utilizing economic mechanisms, i.e. internal enterprise prices and non-price mechanisms for the transfer of products, labor and services among khozraschot divisions. In addition, account will be taken of the level



of utilization of objective measurement techniques, the consideration given to and standards set for the quality of delivered products, labor and services, and evaluations made of the incorporation of deviations from these standards into sanctions against internal enterprise divisions and individual employees, along with the control and evaluation of plan fulfillment throughout the year and how this is reflected in the criteria for economic incentives. Inspections will also cover the effectiveness of measures adopted based on inspections of plan fulfillment. Studies will be done of the level of efficiency in the consumption of labor and materials, the maintenance of individual records of contributions to conservation, and of incentives offered for efficiency on the job.

**Effectiveness of Economic Incentives.** This will concern the way that the counterplan is used for motivational purposes, the justification for documenting cost overruns and the objectivization of damages and other elements of bonus and penalty payments. The objectivity will be examined of internal enterprise breakdowns of wages payable resources, as will the documentation for standards, equipment log books, internal enterprise materials balances and plans. Also important is the allocation of wages payable resources for internal enterprise units to basic and incentive components. The appropriateness of linking the payment of wages to economic or material indicators will also be examined.

Inspections will also determine whether a substantial portion of the incentive component of the economic incentives for technico-managerial employees is tied to the fulfillment of the *khozraschot* indicators of the divisions where their functional responsibilities lie and whether they are sufficiently differentiated according to achieved results. A related issue will be the sophistication of existing internal enterprise regulations and documentary requirements for level of performance.

Regarding economic incentives for the blue collar professions attention will be directed to whether or not the granting of personal classifications is in line with established principles, how effective these classifications are, the forms that have been chosen for basic compensation and the appropriateness of task-based overtime earnings, and the appropriateness as well of the links that have been set up between the incentive component of wages and quality and efficiency indicators, including whether or not bonuses are being awarded in a differentiated way depending on the fulfillment of given *khozraschot* indicators.

At the more backward state farms, evaluations of the reasons for unsatisfactory results will also include an inspection of the fulfillment of intensification programs to date. The latter were divided into 4 parts: 1. production planning; 2. personnel work and the labor force; 3. material-technical assurance and investment; 4. the planning and management system including internal enterprise organization, management and economics. It is essential to monitor the fulfillment of the entire intensification program that was adopted in 1982 and updated in 1983 to correspond to the evolving conditions to the Seventh 5-Year Plan. It must also be determined what progress has been made in rectifying the main reasons for backwardness and how effective



the overall program has been, because new intensification programs will be set up for backward enterprises and new resources allocated to the intensification fund. It would be desirable, obviously, to adopt programs that are tailored to resolving the major and critical problems of these organizations, rather than to institute simply a set of measures that may or may not have an impact on the final performance figures of the enterprises concerned.

Also worthy of attention is the work now in progress on a program for developing associated activities on state farms for 1985 and the Eighth 5-Year Plan, which is designed primarily to make use of internal and local labor force and material resources to generate increased output, revenues and profits that may in turn be used to finance operations in enterprises controlled by the agricultural sector.

At levels of management senior to enterprises it will be important to determine the efficiency of the management of state farm development by middle managers (in the CSR large and sectoral state farms are managed by either kraj or okres agricultural administrations while in the SSR all are managed by okres agricultural administrations), with particular attention to the production structure as mandated by the plan breakdown (by facilitating optimal utilization of soil and climatic conditions, creating opportunities to take initiative in intensifying production by state farms within the context of the tasks in the plan breakdown, by setting objective and feasible tasks rather than by manipulating index number smokescreens), the material-technical assurance of production, the definitions of limits, personnel policy, the consistent control and implementation of intensification programs, assistance in increasing the efficiency of organizational and managerial structures. It will be important to determine the degree to which the managerial system for state farms actually develops the conditions for their greater economic and decision-making autonomy, increases their accountability for their economic performance and thereby as well fostering internal initiatives and incentives to increase the intensity and efficiency of future developments. A number of documents for verifying the operations of okres and kraj agricultural administrations can be obtained at the specific state farms that are being inspected.

Also subject to inspection will be the managerial efficiency of the MZVz related to the development of state farms, and especially plan related and general economic mechanisms; the efficiency of differentiated subsidy payments, increase bonuses, the intensification fund, the labor force stabilization fund and other mechanisms to speed up the pace of production on state farms and to overcome backwardness.

The inspection of state farms will be a complex monitoring project. The criteria for evaluating the quality of management of state farms will be a combination of performance figures obtained in similar conditions or areas and valid guidelines and standards issued by the ministries of agriculture and food. There is no space in this article to cite these guidelines and standards, but they will be a part of the instructional materials for the inspectors. Because of its complexity experts will be employed to perform the inspection. It will be the responsibility of the manager of the

inspection at each facility how best to utilize the experts available to him to uncover both reasons for poor performance and potential areas for improving results. The recognition of specific reasons for shortcomings is the precondition for then drafting specific measures which will accelerate the effective development of state farms and thereby make it possible to tap this important reserve for the further growth of the agro-food complex.

Measures will be directed both at improving the objective conditions necessary for the further development of state farms and at creating the preconditions for recruiting and stabilizing the requisite number of qualified employees, as well as at utilizing effectively the production assets of the state farms. These measures will also focus on the more effective management of the state farms at all levels from the ministries, through the kraj and okres agricultural administrations, down to improving internal enterprise management and more consistently implementing the principle of providing economic incentives for increases in production and strengthening the merit principle in compensation based on the amount and quality of work that is performed.

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CZECHOSLOVAKIA

AGRICULTURAL RESULTS SUMMARIZED

Prague HOSPODARSKE NOVINY in Czech No 40, 1985 p 2

[Article by Engr Zdenek Hoffmann, deputy department chief in the Central Committee of the CPCZ: "Agriculture"]

[Text] This year conditions for our agriculture are doubtlessly the most complicated over the past decade. This was already manifested during the winter months, which registered extraordinarily low temperatures; next, by the delayed start of spring field work and, particularly, during the course of the fodder crop harvest as well as during the grain harvest which has not been fully completed even now in mountainous regions. In various locations, particularly in the East Slovak Kraj and later in the North Moravia Kraj and South Moravia Kraj, natural disasters caused considerable direct damage. It is all the more necessary to appreciate the fact that, even under these conditions, we are once more anticipating good results in agricultural production this year.

Prerequisites exist for the fulfillment of decisive tasks set for this year in the production and bulk buying of agricultural products. In plant production it is primarily necessary to once more positively evaluate the results obtained by grain farmers. Despite a certain shortfall with respect to the area harvested, compared to the considerations contained in the plan and compared to last year's harvest figures and despite higher losses in this year's actual "wet harvest," the latest estimates of the harvest of basic grain crops amount to 10.63 million tons, which is approximately 600,000 tons more than was planned. Including the estimated harvest of corn grown for grain, total production of grain crops is expected to amount to 11.72 million tons which, following last year's record harvest, amounts to the highest harvest in the history of our agriculture! Good results will be attained in the production of fodder crops with respect to volume. However, the quality of the fodder crops produced will be lower. Nevertheless, with respect to the status of crop stands, it is expected that the situation pertaining to bulk fodders will be specifically improved by the production of high-quality silage from corn.

It is gratifying that generally good results in comparison with past years are expected with respect to sugar beets. However, for the present, tests for sugar content of the sugar beet have turned out to be less favorable. Even this was partially influenced by the weather, but in many enterprises the

reason was attributable to long-lasting shortcomings in agrotechnology. Also, the estimated per hectare yields of potatoes--18.5 tons--even though they are lower than last year, can be considered good for this year's conditions. However, it is obvious that planned production levels will not be attained. Failure to maintain a balanced area of potato planting is reflected in this fact. Final results with respect to sugar beets and potatoes will depend to a considerable extent on how well the harvest can be assured, and primarily on how the threatening losses can be limited. The situation will be all the more demanding because after the delayed grain harvest an accumulation of work in plant production persists and, if all field work is to be completed in time, this backlog must be overcome as rapidly as possible.

Even if they mobilize their own forces and means, a considerable number of agricultural enterprises, particularly in the sugar beet- and potato-growing area, will not be able to manage without the assistance of other branches and the local population. As was the case during the grain harvest, it will once more primarily be a matter of the sponsoring enterprises releasing qualified workers to augment crews on harvest lines, on potato-sorting lines, etc. Manual brigade assistance should be necessary this year only in the potato harvest, for the final gleaning of sugar beets and in some specialized enterprises during the harvest of vegetables and fruit.

Of particular importance, however, is the assurance of assistance in transportation. In view of the anticipated high yield of silage corn and the good harvest of row crops, transportation this year will be extremely demanding. Several tens of millions of tons of harvested produce will need to be moved, as will additional substrates. The transport inventory at the disposal of agricultural enterprises cannot naturally master this transportation peak load even if assistance by the CSAD [Czechoslovak State Automotive Transport Enterprise] is guaranteed and if the army helps out also. Even here, therefore, active participation on the part of national committees and the understanding of agricultural organizations are essential if transportation is not to become a retarding factor with respect to fall work.

The handling of harvested row crops and their storage require extraordinary attention. This is primarily true of potatoes, where the state of health of the crop is not overly satisfactory as a result of the saturation of the ground; potatoes are attacked by rot. Both agricultural enterprises and marketing organizations must do everything they can to assure that, given this situation, consumers receive potatoes which correspond to their requirements. A basic provision must be the selection of suitable varieties and lots and increased care in sorting. It is also necessary to appraise the significance of the harvest and particularly to evaluate and utilize fall fruit and vegetable crops.

In livestock production from January through August the plan for market production was virtually fulfilled with respect to all basic indicators and 5,700 tons of slaughter animals, more than 91 million liters of milk and 76 million eggs were purchased in excess of the planned quantities. This made it possible to strengthen operational reserves of foodstuffs of livestock origin and to even create conditions for possibly increasing exports while covering the



needs of the domestic market. Realistic prerequisites exist for assuming that the planned volume of livestock production this year will once more be slightly exceeded and, thus, planned targets for the entire 7th Five-Year Plan in this area would be met.

The fact that tasks in decisive sectors of livestock production are assured through a growth in intensity deserves special mention. For the first half of the year the utility of milk cows grew by 35 liters compared with the same period for 1984 and reached 1,777 liters; the daily weight increment for hogs grew from 525 grams to 541 grams; the production of eggs per hen increased from 119.3 eggs to 123.4 eggs. However, the feeding of cattle remained a weak spot. Even if it is possible to admit that it was precisely here that hard winter conditions were felt--a substantial portion of the cattle in this category is stabled in light or temporary structures--the reasons for the lack of success must be sought in many enterprises among subjective causes. The management of fortified fodders is generally developing in a satisfactory manner. In comparison with last year, consumption of fortified fodders increased slightly only with respect to the production of each liter of milk and each kilogram of weight increment in cattle feeding. Even here, the influence of the hard freezes was felt and some agricultural enterprises were even affected by the lower quality of bulk fodders, particularly of silage which had been produced last year.

As can be seen from the character of agricultural production, efforts regarding a successful conclusion of this year's work must already now be merged with the creation of optimum conditions for entering 1986 and the 8th Five-Year Plan. In plant production the primary task is to secure the sowing of winter crops within appropriate agrotechnical deadlines and to the extent corresponding with the anticipated growth in the production of grain crops. Even in the face of a generally satisfactory level of available equipment the persistent delays in field work will result in a race against time.

With respect to livestock production, in the immediate future, it will be primarily necessary to create conditions for the fulfillment of tasks and the maintenance of the attained intensity during the winter months. Last winter, which caught a number of agricultural enterprises unprepared in its first phase, should be a lesson. Even in the face of this year's good harvest of grain crops and fodder crops, it is necessary to effectively economize with respect to all fodders, to continue to strive to attain rational utilization of core seeds and use any possible surpluses to strengthen reserves. This is one of the fundamental conditions of stability in livestock production and, simultaneously, in the growth of its profitability.

The end of the year should be utilized for detailed analyses of this year's results. Despite overall positive developments significant reserves remained both in plant production as well as in livestock production. They are attested to primarily by considerable differences in yields, utility and the consumption of fodders, both among enterprises operating under similar conditions but also within enterprises between individual centers and operations.

5911

CSO: 2400/39

CZECHOSLOVAKIA

BRIEFS

CSSR-GDR TRADE AGREEMENT SIGNED--Berlin, Oct 25 (CTK correspondent)--Czechoslovak Foreign Trade Minister Bohumil Urban and his GDR counterpart Horst Soelle signed today an agreement on mutual exchange of goods in 1986-1990, worth more than 16,000 million roubles. The agreement based on the protocol on coordination of national economic plans of the two countries signed in September provides for large exchange of engineering, electrical engineering and electronics products, raw materials and fuels, chemicals and consumer goods. Minister Urban pointed out that the GDR is Czechoslovakia's second largest trade partner, after the Soviet Union. [Text] [Prague CTK in English 1652 GMT 25 Oct 85 LD]

/8918

CSO: 2400/38

GERMAN DEMOCRATIC REPUBLIC

MEASURES TAKEN TO HALT DETERIORATION IN PREFABRICATED HOUSING

East Berlin BAUZEITUNG in German Vol 39 No 9 Sep 85 pp 413-415

[Article by Inge Kohl, engineer, GDR Construction Academy, Institute for Housing and Social Construction: "Maintenance Measures in Industrial Housing Construction"]

[Text] In the years since the establishment of the GDR more than 2.5 million new dwellings have been built, including about 1.6 million dwelling units using industrial methods, primarily large panel construction. This is equivalent to a 24 percent share of the overall inventory of industrially built dwellings as of 1983. By 1990 this share will increase to 33 percent and by 2000 even up to about 41 percent. Compared to existing information and experiences in respect to maintaining and modernizing traditionally built old-type construction there are no adequate substantive prerequisites and scientific bases available for the maintenance of industrially built apartment buildings.

With the inclusion in the plans for science and technology of topics concerning maintenance of industrially built apartment buildings—primarily in the housing construction combines and the GDR Construction Academy—one economic requirement whose magnitude will continue to increase in the next few years has been satisfied.

Currently instances of damage occur in buildings which were built 10 to 25 years ago with a frequency of 15 to 20 percent. These do not include the warranty services in the first 2 years.

The present article will not deal any further with the cause of these damages since there are extensive publications on this set of problems which demonstrate analytically to what degrees the damage-causing factors are due to design prefabrication, construction and natural wear and tear (environmental damage).

Research and development work on the maintenance of industrially built apartment buildings concentrate on various comprehensive sets of tasks whose interrelationships are shown in Figure 1. This chart shows that the development of technologies for repairing structural parts and buildings with

structural, technological and economic solutions is only one comprehensive set of tasks. In addition to that, the following comprehensive sets of tasks are of equal importance:

- wear-and-tear research with the implementation of long-term studies, structural diagnostics and creation of engineering-theoretical principles
- construction damage analyses with statement and characterization of construction condition by types of construction
- maintenance-oriented construction with the use of maintenance-oriented and easy-to-repair materials and designs
- the further development and availability of materials, small devices and sets of machinery.

#### Existing Construction

Existing construction in industrial housing construction is characterized by:

- different methods of construction, such as large block construction, strip construction and large panel construction
- various series of types, such as L4, Q3A, QP, P2, WBS 70 (the series designations in the bezirks numbers well over 100)
- various construction features.

More precise examination of the construction features reveals a broad array, as,, for example, in respect to the facade:

- layered construction (one, two and three layers)
- external wall joints (single and double step layered joint)
- balconies and loggias

in respect to the roof:

- roof styles (flat roof, pitched roof)
- roof coverings (liquid coatings, sheet coverings, made of various materials with a polyester and/or bitumen base, as appropriate)

in respect to interior finishing:

- window designs (double-glazed casement windows, thermowindows, heat-insulating windows and soundproof windows)
- floor coverings (composition flooring, PVC covering)



in respect to technical building equipment:

- heating systems (single and double pipe heating)
- sanitary installation (single piping, pipe assemblies)
- electrical installation (horizontal and KLI system, respectively).

Because of this variety, in developing tasks for maintaining industrial housing construction it is mandatory to focus on representative types which can be combined according to criteria of a structural and architectural engineering nature. Existing analytical efforts have produced the following representative types:

TDR Brandenburg	large block construction	0.8 t
IW 72	large block construction	1.1 t
P Halle, P2	panel	5.0 t
WBS 70, P2	panel	6.3 t

Construction features of many series can be systematically classified with these representative types.

#### Key Issues in Damage

On the basis of evaluations of existing analysis materials and ideas on repair in the bezirk, typical key issues in damage can be established.

#### Roof

Aging and damaging of roof coverings and attic space by:

- manufacturing errors and variations in quality of the raw materials
- functional deficiencies in the installation parts, their roof connections and joints, intensified by thermal expansion behavior and natural wear and tear
- deficient cross-ventilation which results in rotting of the heat insulation in the sill space.

#### Facade

Crack formation and concrete spalls on weatherproofing layers and exposed seats because of:

- in part inadequate quality of concrete and particularly in the case of the loggias too little concrete, intensified by atmospheric factors which result in the carbonating of the concrete from the intrusion of carbon dioxide ( $\text{CO}_2$ ) and moisture ( $\text{H}_2\text{O}$ ) as well as from gypsum formation in the concrete from

intrusion of sulfuric acid ( $H_2SO_4$ ) and also result in the corrosion of the steel reinforcement by appropriately conditioned reduction in the alkalinity of the concrete (pH value  $\leq 13$ ).

—leaky external wall joints caused by nonobservance of the assembly tolerances, faulty installation of the caulking, edge breaks, and embrittlement of the joint mastics, particularly of the Morinol which is frequently used

—leaks in the window sill and base area

—inadequate heat insulation resulting from more demanding requirements of TGL 35424 which has been mandatory since 1 April 1981; existing thermal bridges in the window rabbet region and in the connecting sector of loadbearing partitions and ceilings; the processing of the insulating materials; the rotting of the insulating materials when moisture is present (less frequent).

#### Other Sectors

Other damage occurs in addition to the construction groups which have been mentioned:

—in the basement area, primarily thorough wetting caused by leaky joints, inadequate drainage and backfill

—in the interior work, particularly in the windows (water drip), thermopanes and the floor covering

—TGA [technical building equipment] sector in respect to heating, sanitary and electrical systems.

#### Key Research Issues and Topics for Maintenance

Since 1984 there has been a state plan topic which is being revised by the GDR Construction Academy in collaboration with 11 housing construction combines.

The goal of the state plan topic is to develop the necessary efficient material-structural and technological solutions for the special production units which starting in 1984 are to be produced in the housing construction combines and to put them into practice over a short period of time. This goal is the result of the 15 May 1982 Politburo resolution in which responsibility for these construction tasks was transferred to the housing construction combines. Thus, technical solutions and technologies must be prepared for the structure-based repair of the apartment buildings and community facilities which are built by the housing construction combines. This affects primarily measures to guarantee or reestablish the functional safety of roofs and weatherproofing lawers, joints and loggias. The repair technologies must be tested and brought to the point of being put into practice. In keeping with the territorially differentiated conditions of the housing construction combines provision is made for dealing with variants. To evaluate the

practical testing of the initial introduction, the generalized results are to be prepared in catalog form by the end of 1985 and, as opportunities permit, be put into practice immediately.

In this, the following key points must be considered in respect to repairing the products of industrial housing construction:

In respect to roof maintenance there is the task of getting away from pasteboard covering which at the preset time is almost exclusively the practice, and to replace it with roof covering using suitable cold or hot liquid coverings with a bitumen base or bitumen-polymer mixtures and sheeting coverings with a greater useful life.

For weatherproofing layers and loggias, the elimination of edge spalls and cracks must be tested with various kinds of materials and the availability of facade coverings with suitable intermediate layers and finishing coats must be guaranteed in a material-technical manner and must result in being ready for series production. For this material and technological studies must be carried out in respect to:

- the suitability of the basic materials, such as, for example, aging, tensile behavior, adhesion
- determining the optimum formula and consistency
- manufacturing, supply in respect to architectural engineering
- process technology for handling the construction material.

To refurbish joints the mastics must be studied or further developed in respect to suitability and familiar sheet materials must be manufactured and produced as self-bonding materials using application processes with a suitable adhesive which must be developed on an industrial basis.

In this connection scaffolding equipment must be further developed in such a way that technologies which use little in the way of scaffolding, as for example construction trestles, can be used. In this connection, a special problem is posed by the technique of application to the facade and the roof, respectively. The degree of mechanization should be raised to a higher level with the development of solutions for repair. This could be done, for example, by making available small devices for partial removal of worn-out construction parts and materials as well as for the application and installation of new construction parts and materials.

Assessment of the International Level Compared to the Technical Solutions in the GDR

#### Roof Covering

In contrast to the cold roofs which are dominant in the GDR, mainly thermal roofs are produced internationally, protection of which is accomplished, in

addition to high quality insulating materials, mostly with multilayered plastic sheeting made from special polymer systems. These processes are technologically advanced and guarantee a long useful life; but they are also very cost intensive. As was shown by patent research which was implemented in 1983-1984, liquid coverings will continue to be applied with various chemical systems. In this, in addition to organic polymer layers, bituminous products dominated which are stabilized by various additives, primarily high polymer substances, but which thus also become more expensive. In the GDR the focus is on cold and warm liquid coverings respectively, using a bitumen base (Dicosol, Flexobit "S") and on guaranteeing this in terms of material.

In housing construction the pasteboard roof will continue to be used (in this connection it would be favorable to apply Flexobit "S" to increase the useful life) and to lay the heavy fusible roof covering, a solution from the Suhl WBK [housing construction combine]. Plastic sheeting covers will still not be used primarily for material-technical reasons.

#### Facade Repair

Coating systems for facade repair are available internationally which are used in accordance with crack width and crack movement. By way of summary coating systems can be represented as follows:

—elastic coating systems using a binding agent base of synthetic dispersions with (and without) elastic intermediate layers and with a second coat

—elastic synthetic resin stucco, which can be thinned with water or solvent and which assumes the function of covering over cracks with a one-time application; an intermediate or final coat is possible

—composite system between plastoeastic embedding material with elastic plastic fabric

—composite system between disperion paint containing embedded glass fleece.

The materials available in the GDR permit repair of single cracks up to 2 mm wide and making them water-repellent. In this connection the following materials are to be tested and utilized:

Designation	Material Basis
<hr/>	
Repair	
Betonhaft	saponification-resistant polyvinyl acetate
Thioplast	polysulphide rubber
Cenusil	silicone rubber



<b>SYSpur 8707/1</b>	<b>polyurethane</b>
<b>Building mastic</b>	<b>polyacrylate</b>
<b>Brushable plaster</b>	<b>polyacrylate</b>
<b>Making Water-Repellant</b>	
<b>NS 5800</b>	<b>silicone resin</b>
<b>NB 60 19 SE</b>	<b>silane resin</b>
<b>Polysiloxane</b>	<b>siloxane</b>
<b>Sealer</b>	

A coating system for overall facade coating was developed by Lacquers and Paints Combine VEB. This system meets the requirements of facade repair and consists of sealer, building mastic, brushable plaster and facade paint with a material made of polyacrylates.

Repair of concrete spalls, for example on weatherproofing layers and loggia panels, is done worldwide with the same processes as are common in the GDR:

—plastic concrete or mortar with unsaturated polyester resins or epoxy resins as the base. In this instance it is a concrete in which the cement binder is replaced by a liquid plastic.

—plastic cement concrete or mortar. An aqueous plastic or elastic dispersion (for example Betonhaft) is added to the concrete or mortar. The base is PVAC (polyvinyl acetate).

—gunite. This is the familiar dry- or wet-spray process with a two-chamber spraying machine.

The use of the appropriate variant depends on the magnitude of the damage. At present plastic cement concrete is being used in the GDR.

Plastic concrete (epoxy resin) is currently prohibited for use in housing construction. At present this concrete may only be used in acidproof buildings and nuclear power plants.

At present gunite cannot be used because the material base is not adequately available. Starting in 1987 the housing construction combines will be able to order the two-chamber spraying machine.

Beyond that, for repair of spalled concrete surfaces in the FRG, Austria and France, a repair mortar is used which is specially made for this purpose in the factory. Through the selection of fast-hardening cements, appropriate aggregates ( $\leq 8$  mm), additives which delay drying and have a positive impact

on the final hardness, and through improvement with synthetic dispersions the following properties are achieved which are not possible under construction site conditions:

- slight shrinkage
- good workability
- good effectiveness of the additives used
- correct sand and binder mixture and intensive mixing in modern plants.

Joint sealing and repair is no longer viewed internationally as a problem since reliable sealing materials (polysulphide sealing materials) are available in sufficient selection and varieties. In particular, polysulphide bonds have proven their value; they correspond to the thioplast bonds which are well known in the GDR. The useful life is estimated at 20 years.

For 1985 industrially produced joint bond FB 83 with a polysulphide polyester base and a bond width of 100 mm is being delivered in rather large quantities to the housing construction combines. An increase in production is planned.

The following are scheduled for testing as additional material variants:

- thioplast materials with a polysulphide rubber base and
- Cemusil mastic and Signa bonds, respectively, with a silicone rubber base.

#### **Summary**

Repair technologies using various existing materials and processes as well as those that need modification must be prepared for the production units which are specially produced in the housing construction combines. In particular the use of the processes in buildings with residents must be taken into consideration.

An essential basic prerequisite for repairing industrially built apartment buildings is the material-technical guaranteeing of suitable construction materials, machines, scaffolds and work areas which have already been developed.

It is essential in further work to develop repair technologies for finish work, the TGA sector, especially sanitary installations and heating, and to include in the overall set of problems other means of construction, such as large block construction or buildings with base concrete exterior walls. In repairing facades of industrially housing construction thus far measures to increase thermal insulation have been lacking in the task-setting by the main contractors (KfV [municipal housing administration], AWG [workers housing construction cooperative], Building Management VEB). There are gable coverings only in isolated instances for large block construction and for type QP in Berlin. In this connection it must be stressed that all new housing

construction which has been built since 1980, does not meet the present standard for thermal insulation. At the latest with the repair of heating systems with the installation of thermostat valves an increase in the thermal insulation of the enclosing construction (gable, top-floor ceiling, basement ceiling) would be essential in respect to saving energy.

**Figure 1. Maintaining Industrially Built Apartment Buildings**

**Key:**

**1. Research on wear and tear for existing and new structural parts and buildings:**

- long-term studies
- structural parts diagnosis
- creating engineering-theoretical principles

**2. Analyses of construction damage**

Description and characterization of construction condition according to types of construction

**3. Period of time until occurrence of damage after dwelling occupancy**

**4. Warranty service 0 to 2 years**

**5. Running control and repair**

—constant—

**6. In terms of repair and reconditioning periods 2-80 years**

**7. Prevention and elimination of construction damage**

**8. Preventive impact on a long-term useful life of the structural parts and buildings**

**9. Reestablishing construction condition to make structural parts and buildings usable**

**10. Maintenance-oriented construction**

**11. Use of maintenance-oriented and easy-to-repair materials and designs**

**12. Preventive repair**

**13. Establishing repair and maintenance intervals, observance and control of same**

14. Developing technologies for repairing structural parts (structural, technological, economic solution)

15. Inventory of buildings

16. Conclusions for

—maintenance-oriented construction

—new process operation in implementing construction

—scientific-technical regulation

—creating engineering-theoretical principles

17. Catalog of technological lines for repairing existing buildings of industrial housing construction; model technologies

18. Further developing and making available materials of the supply industry (chemical industry)

12124/13104

CSO: 2300/537



HUNGARY

PROBLEMS, DEVELOPMENT OF COAL INDUSTRY WEIGHED

Long, Deep Look

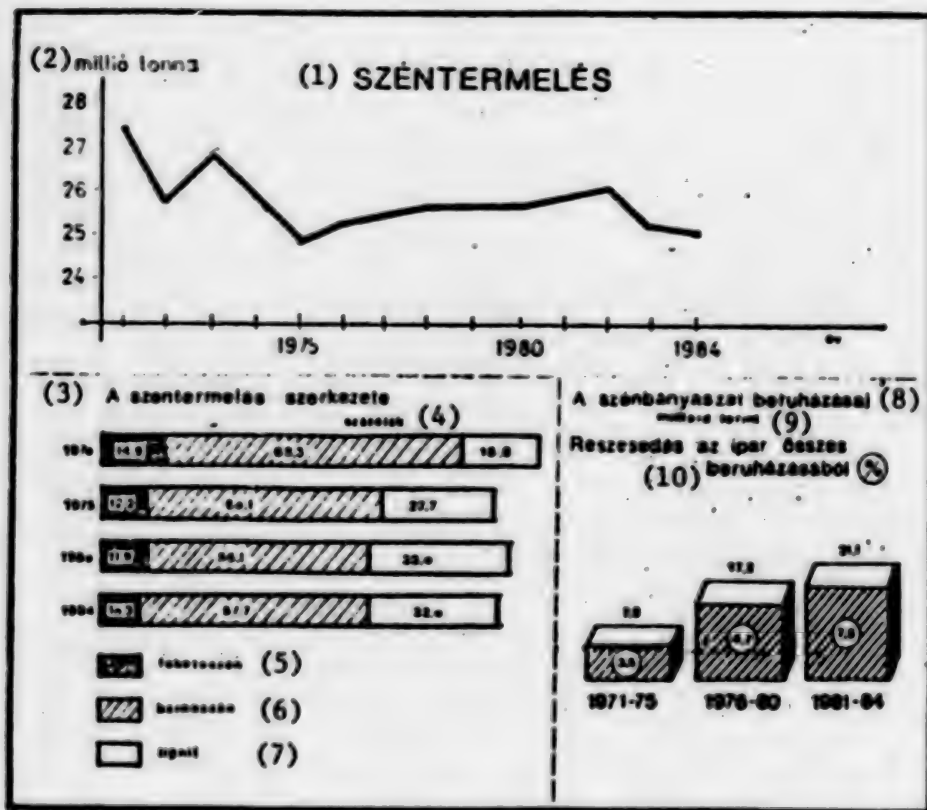
Budapest FIGYELO in Hungarian No 38, 19 Sep 85 pp 1, 6

[Article by Istvan Garamvolgyi: "Looking Deep"]

[Text] The growth or even the cutback of coal mining, the level of coal production at any time is influenced by the energy management concepts and their changes. In the decade of the 1970s the gains made by the hydrocarbons, the lower cost of producing and purchasing them decreased the domestic coal's role. But a decade later the economic and foreign trade relations again re-evaluated the significance of coal and coal mining.

The subject is not that at all that the manifold increase in the price of oil has automatically made the domestic coal production economical. The prevailing objective natural conditions of the new energy situation—for us—have justified and are still justifying our endeavors to increase the use of coal. Such given conditions include the following: the opportunities of obtaining ruble-accounted petroleum have decreased in comparison to earlier periods; one condition for increasing the transportation of energy sources is that participating in the investment must also include convertible currency; we have reached the possible peak in the production of domestic hydrocarbons—even earlier for oil and in recent years for natural gas. Among the primary energy sources increased production of the coal resources only is possible over the shorter as well as longer term. The experience gained at the time of last winter's energy crisis should also be mentioned. Even though in recent years the import ratio of energy sources has decreased by a few percentage points, yet the almost 50 percent ratio can cause hangups in acute situations.)

**Figure 1.**



**KEY:**

- |                                     |                                            |
|-------------------------------------|--------------------------------------------|
| 1. Coal production                  | 6. Soft coal                               |
| 2. Million tons                     | 7. Lignite                                 |
| 3. The structure of coal production | 8. Coal mining investments                 |
| 4. Percentage                       | 9. Billion forints                         |
| 5. Hard coal                        | 10. Share of industry's total investments. |

### Price of the New Mines

The new realities related to coal put two development programs--the Eocene and the Lias programs--on the agenda in the second half of the last decade. The former is aimed primarily at the production of Central Trans-Danubian soft coal to be used mostly in power plants, while the latter is to establish and build new mines to produce hard coal in the Pecs area and suitable for smelter coke production. An interesting aspect of the Eocene program from the professional, that is, coal mining viewpoint: in deep mining the annual production per mine shaft is about 400,000 tons while in the new mines it will be several times that much.

Just like all branches of the energy field, coal mining also requires extremely large amounts of capital. And buildings and opening mines are not

inexpensive developments at all. The coal mining investments during the time period of the cutback--in essence 1965-1975--were also similar in nature and were used primarily to improve the mechanization of coal production. The ratio of machine-produced coal increased from 5.8 percent to 49.6 percent in production, mechanized loading increased from 32 to 73 percent, in transportation from 78 to 94.7 percent, and in addition to this the concentration of production increased, the number of deep-cut mines dropped from 126 to 54.

The increasing important role coal fills in energy management is reflected among other things by the fact that the investment opportunities have increased. In the 1971-1975 time period it had a 3.5 percent share of industry's investments--this was the lowest ratio of investment in coal mining, in the next time period it had 4.7 percent, and in the last 4 years it had 7.5 percent.

Between 1976-1984 the amount of financial transactions within the coal mining investments was 38.3 billion forints.

It is not easy to form an objective opinion about coal mining on the basis of the investment-to-yield relationship taken in the broader sense. Since one side of the coin can be read so that the possibility of development-investments has increased in the branch, the budget is helping the mining enterprises with direct and indirect subsidies, and various preferences. But there are problems with the other side of the ledger, coal production is not reaching the planned levels, and since the beginning of the year there have even been shortages of coal at times.

#### Only Dropouts Replaced

Seeking superficial answers--which by the way does have an element of truth in it, since the branch is not meeting its pledges and obligations tied to the investments or to the various benefits--and the coal mining investments have not proven effective. This means that they are not fulfilling the promised projections of 26 million tons of coal to be produced in 1985.

But there are also other reasons for the lack of coal, deeper in the strict sense of the word, reaching back in terms of time. At the time of the cutback certain processes developed which to this day have not been completed. Then the demand for coal stagnated and it raised no eyebrows that the deep-cut coal fields were gradually getting exhausted--as was also indicated by the decrease in the number of shafts, and that the decrease in the production of comparatively good quality coals--hard coal, brown coal--is being counterbalanced by lignite, at least in terms of tonnage. As far as brown coal is concerned the mines opened in connection with the Eocene program were supposed to halt this process, as they must make up for the production of mines shut down due to exhaustion of the coal fields. In 1970, out of the 27.8 million tons of coal, 19.5 million was brown coal. In 1980 this was only 14.1 million out of 25.7 million tons, and in 1984 it was 14.5 million which included the 2 million tons produced by the two new mines--Markushegy and Nagyegyhaza--already in partial production.

The very efforts aimed at fulfilling the production projections at all costs prove that the branch was not thoroughly prepared to meet the production tasks defined in the national economic plan. It could be felt even in the previous plan period that the coordination between preparedness--taking this to mean inventories ready to be mined, shaft preparation, water removal and gas removal, the mechanical condition of machinery, manpower--and production was deteriorating, and in the current plan period this has practically broken down. The length of tunnels in terms of kilometers decreased from 230 in 1980 to 167 in 1984, the average age of mining machinery amortized in 5 years is higher than 6 years, production on scheduled days off has become standard and increased, and its share of the total production is now 5 percent but at certain enterprises--the Tatabánya and the Oroszlány Coal Mines--it approaches or exceeds 10 percent. The physical burden on about one-third of the coal mining employees, those who regularly participate in production on their days off has reached an extent where this also lowers their performance. The wage and income level which well surpasses the industrial average has not stabilized employment, the numbers of people working underground and in coal production continue to decrease. In 1984, 15.3 percent of the manual laborers left.

#### Underground, On Surface

Forced measures have often been taken so that the tonnage plan could be fulfilled. Partly in order to keep the manpower, additional mine fields that earlier were considered unworthy of production were attached to existing shafts which were running out of coal. Even though this made it possible to continue to use the mining equipment, it usually unfavorably influenced the production costs and the overhead cost of coal has increased by 54 percent in the last 5 years. It can also be considered a forced measure that all mining enterprises have set up so-called emergency open pit mining operations. If we consider production--the results and shortcomings of solving the timely tasks--to be the yardstick of qualifying the enterprises organization and branch management, coal mining cannot be given a passing grade. The two main tasks of the branch are: implementation of the enterprise developments by the deadline and within budget of the major state investments concentrated on the two enterprises--the Oroszlány and the Tatabánya Coal Mines--and fulfillment of the production quota determined for the branch as a whole. Neither is being fulfilled completely. Even though it cannot be proven item by item that the eight independent enterprises have worried more about their own problems than about the common task, the coordinating and advisory function of branch management and the Mining Association, it appears that the organization of the enterprises has been insufficient in implementing the interests and requirements of the national economy and the branches. The mines are independent enterprises under national administrative supervision. The answered question is: How can the branch interests and the national economic interests and tasks be more successfully represented and implemented while respecting independence?

In the final phase of developing the new 5-year plan we can now outline only some ideas which are still being debated. Mine construction connected with the Eocene program will probably continue but a significant portion of the investment finances will have to be spent on mechanical reconstruction.



The Lias program became timely because of the availability of coal suitable for smelter coke production and the international coke shortage. The latter situation now belongs to the past. Partly this and partly the limited size of the investment finances make it possible and necessary to slow down the implementation of this program and cut back the goal and investment in the new plan period.

#### No More By 1990

But some new previously unforeseen investment needs are also appearing--ones that cannot be postponed. In this plan period coal consumption was at approximately the same level as the basic coal users, with coal consumption by the population as the only exception. The basic reason for this is that in housing construction the share of construction from private resources and in general the single family home construction have increased. Except for the fortunate ones who were given natural gas, coal is the basic and indispensable fuel for this housing format. As early as 1980 the original estimate of 3.4 million tons needed by the population proved unrealistic because the actual need was 4.9 million tons. Basically what makes it more difficult to meet the needs which have been increasing ever since is that the major portion of Hungarian coal is unsuitable for household use without further processing. At one time coal mining had significant briquette-making capacities but a part of this has been eliminated due to lack of demand. In the new plan period new capacities and plants must be built to process coals with low heating value.

The new realities have swept away the excessively ambitious ideas concerning the domestic coal mining rebirth under new circumstances. Basing calculations merely on the coal in the ground we heard and read about the long-range possibilities of doubling and tripling the 25 million tons per year production which characterized the last 10-15 years. In recent years the national economy spent many billions of developing this undoubtedly indispensable energy supply branch but even with the overtime work of the coal industry's workers performed under difficult conditions this year's 25.2 million ton national economic goal will not be met. The possibility that even the additional investments of the new plan period will not increase the quantity of domestic coal does not generate any particular enthusiasm either.

#### Mining Regulations, Subsidies

Budapest FIGYELO in Hungarian No 38, 19 Sep 85 p 6

[Article by g.: "Tailor-Made Regulations"]

[Text] Coal mining in most countries is subsidized in some manner to maintain its competitiveness. In this country, too. The eight mining industry enterprises--the Mecsek, Dorog, Tatabanya, Oroszlany, Veszprem, Nograd, Borsod and Matraalja Coal Mines--are income-oriented economic operating units. They are industrial enterprises where the general regulators of economic operation are at best implemented in a tendency-like manner as a result of direct and indirect subsidies, exemptions, and preferences.

Direct subsidies are:

--100,000-forint budget grant per apartment for the construction of miners' apartments;

--Budgetary contribution for the formation of the 6-percent R-fund [profit sharing]. In this plan period the anticipated amount of this is about 2 billion forints.

--Reimbursement of the so-called mining damages caused to third persons by the budget is about 500 million forints per year.

Indirect subsidies, exemptions and preferences are the following:

--The budget provides the finances for about 60 percent of the enterprise investments;

--Exemption from paying property and wage taxes;

--Wage preferences; this year in addition to the centrally determined 5.5 percent and additional 1.5 percent plus 2 percent, plus 130 million forints of raises tied to performance.

The fundamental fault of this "tailor-made" regulation is that the subsidies and preferences are not tied to performance. The wage preference tied to performance is one rare exception. The following is a rather grotesque example of the lack of connection between performance and subsidy. One of the mining enterprises reported that it is unable to fulfill its own plan, its production will decrease, and because of this it will have a shortage in its development fund and it asked to make up for it by the grant from the budget. In simple words: larger budgetary subsidy for smaller enterprise performance!

If the coal mining enterprises had to operate by the regulators which govern industry they would need about 70 percent higher sales income or that much higher coal production. To word it differently: the combined value of direct and indirect subsidies and preferences can be put at about 15 billion forints.

The "tailor-made" regulations are also reflected in the accounting of the results. The combined profits of the eight enterprises serving as the basis of accounting was 484 million forints in 1984 and their available participation fund was 491 million forints. Out of this the budgetary R-fund grant was 451.2 million.

The specific regulatory tool--economically justified--of the economic operation of the coal mining enterprises is the "profit equalization." Since the particular geologic production conditions of the enterprises differ, the ones in favorable situation obtain mine allowances. Taking this into consideration a profit-regrouping takes place. In 1984 the Mecsek, Veszprem, Borsod and Matraalja Coal Mines transferred over 500 million forints to the other four enterprises. And even though the action produces zero results within coal

mining over-all--the combined profits of the eight enterprises and their own profits according to the balance are the same to the penny--the profit equalization thoroughly modifies the final profits of the individual enterprises, for example, the profits of the Mecsek and Borsod Coal Mines according to the balance sheet became figures with negative signs.

Just like at the major agricultural operations, the auxiliary activity, the series of sideline businesses, the so-called noncoal activity also came into existence at the coal mining enterprises. Within the framework of noncoal activity the coal mining enterprises are performing machine industry, electrical machine industry production, industrial services, investments at their own overhead, construction, and construction industry services; they are also competitive in these areas of activity as a consequence of the subsidies and exemptions. They are cooperating with Western mining machinery production companies, making it easier for themselves to obtain and adapt modern technology. The noncoal activity grew very dynamically in this plan period while its number of employees decreased and the sales income derived from this increased by over 50 percent in the 1981-1984 time period and last year exceeded 9 billion forints. The growth of the noncoal activity which stabilizes the financial and economic operating situation of the enterprises was in all certainty also encouraged by the fact that the extra income this produced for the enterprises was not included in the profit equalization mechanism.

#### Consumption Patterns Analyzed

Budapest FIGYELO in Hungarian No 38, 19 Sep 85 pp 6, 23

[Article by "gar--": "Who Needs the Coal"]

[Text] Coal's share has significantly decreased in the energy structure, in the use of the primary energy sources. It was 50 percent in 1970, 28.8 percent in 1980 and 26.8 percent including the imported coal in 1984. The number of coal users also decreased.

The number one user of domestic coal is the electrical energy industry, the share of which is 70-71 percent calculated in tonnage and 56-57 percent in heating value. About 14 percent of the coal production--but 18-19 percent in terms of heating value--is taken by the TUZEP [Fuel and Building Materials Trade Enterprise] Association and is sold to the other "big consumer," the population. In terms of tonnage as well as of heating value--coal mining has a role in sales with shares of about 5 and 8 percent, respectively. This includes the approximately 1.5 million tons of yearly plant emoluments and the coal retained for further processing, briquette production and dehydration. Domestic coal is now used for technology purposes only in a narrow area--in the iron and steel industry, in the aluminum industry, in cement, slaked lime, brick production and in some chemical plants--a total of 1.2-1.3 million tons per year, or calculated in terms of heating value about 10 percent of the domestic coal. It is seen from the tonnage and heating value data that the best quality domestic coals are used for technological purposes while the ones with low heating values--including the lignites--satisfy the



needs of the electrical energy industry and the average heating value of the coals which go to the TUZEP lots is sort of in the middle.

With the exception of the Matraalja Coal Mines which ships the lignite to the power plant, the seven coal mining enterprises ship to all users--including the population through the TUZEP lots. At the same time there were shortages and supply problems in the population's use and purchasing of coal in 1984 and 1985 not only in the winter months but also at the end of the summer. It is definitely true that this year in the weeks and months of purchasing for the new heating season the purchases are also motivated by the coal shortage experienced in the beginning of the year and whoever can do so will try to obtain what he needs for the entire winter and spring. But there are also other kinds of objective reasons for the "shortage-breeds-shortage" phenomenon.

The population uses only coal which comes from deep-cut operations--and from supplementary import. The deep cut operation--open pit mining structure of domestic coal mining was modified unfavorably from the viewpoint of satisfying the population's needs; the quantity and ratio of coal from deep cut operations have decreased while the tonnage produced and tonnage ratio from open pit mining increased. In addition to the Matraalja Coal Mines today every coal mining enterprise does open pit--in essence--lignite mining the share of which approximates 33 percent--only in terms of tonnage.

Even though there are seven enterprises supplying the TUZEPs, the Borsod coal has an outstanding role in the population's supply. But the production of the Borsod Coal Mining Enterprise is continuously decreasing: from 5.4 million tons in 1981 to 4.8 million tons in 1984, and its shipments to the TUZEPs from 2.3 million tons to 1.9 million tons.

This year coal mining must supply the population with 5.2 million tons of coal and briquette. The other enterprises should counterbalance, make up for the further decreases of the Borsod coal shipments. Coal mining was producing on schedule until 1982, the split was almost 50-50 in the production of each half year. But being on schedule also lagged in recent years together with the production decreases. In the first quarter of this year in the middle of the energy shortage coal production was 300,000 tons lower than a year earlier; in the second quarter the difference was nearly 800,000 tons and thus in the first half year only 44.5 percent, or 11.2 million tons of this year's 25.2 million ton projection was produced. Under such circumstances the shortage will be conspicuous somewhere.

Coal mining has pledged to make up in the second half of the year this year's short-falls of the Borsod mines to the TUZEPs--with briquettes and coal--and also requested additionally accounted import for this. It is an open question whether it will be able to produce the 14 million tons in the second half of the year which is still needed for the 25.2 million tons. In 1982, 13.5 million tons were produced in the second half of the year for the 26.1 million tons produced in the year. It is promising from the viewpoint of the population's coal supply that the TUZEP supply is augmented by 1.3 million tons of import in addition to the domestic coal. But even so, there is no guarantee for reliable and smooth coal supply.

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POLAND

## PROBLEMS RAISED IN MEETINGS OF SEJM COMMISSION ON FOREIGN TRADE

Warsaw RYNKI ZAGRANICZNE in Polish No 119, 3 Oct 85 p 8

[Article by Bogda Zukowska]

[Text] Several months before beginning the implementation of the next National Socioeconomic Plan and several weeks before the inauguration of the next term, it is well to recall what was said about foreign trade in the Commission for Economic Cooperation with Foreign Countries and the Maritime Economy during the 3-year period now ending and the problems it leaves behind for the deputies of the Ninth Sejm term.

"It can now be said that when the term began none of us believed that there would be such strains and collapses, that it will take so long to find a way out of the crisis," said the chairman of the Sejm Commission at its last July meeting. During the Eighth term there were 37 meetings within the framework of the Commission for Foreign Trade. In summing up this stage of its activities it was determined that almost half the deputies participated in preparing opinions, reports and joint papers. Since April of last year the subject of foreign trade was expanded to include problems relating to the maritime economy, and the deputies—already within the framework of the transformed Commission for Economic Cooperation with Foreign Countries and the Maritime Economy—held 12 meetings.

### Hard Subjects

Probably every Sejm commission has its "hard subjects." In the case of the commission concerned with foreign trade, both in the papers as well as in the discussions, it was never possible to ignore the problems connected with the quality of exported goods, difficulties with availability of supplies, the low effectiveness of incentives which are supposed to stimulate export, and the imperfect exchange-rate policy. Finally, the matter of the "technological gap," most evident in the electromachinery industry, aroused a growing unrest in the deputies.

There is also talk about a drop in sales, especially products of the electromachinery industry, and the need to quickly institute a "Program for Pro-Export Conversion of the Economy and Restructurization of Export Production." This postulate was recorded almost two years after the Commission's special meeting

devoted exclusively to problems of electromachinery exports. Scarcely a month earlier, in October 1983, the deputies obtained a list of sectors deemed to be pro-export, where the leading role fell precisely to this industry. The deputies and representatives of the involved industries while discussing the primary obstacles in November 1983 were in agreement that aside from external preconditions, our offer ceases to be competitive in view of its engineering obsolescence as well as the poor quality and ordinary carelessness in execution. The data presented by the Supreme Chamber of Control have always shown how much we lose because of these last two reasons.

At the same time, the greatest commitments in the export plan have been imposed on the electromachinery industry. As to the reality of these plans, the opinions of the deputies and the representatives of the foreign trade offices differ greatly, as a rule. Unfortunately, the deputies were usually right when they anticipated that the plan would not be fulfilled. However, there was no divergence on the opinion that exports of raw materials could be further increased. The basic source of foreign exchange to service the indebtedness, it was said as early as 1983, should be the sales of processed goods and not raw materials. But here the next problems arose. At a Commission meeting in April 1984, Minister Nestorowicz put it this way: "We are approaching the limits of export defined by the technical capability of our industry."

#### Road to Restructurization

In saying this, the Minister was not referring simply to the electromachinery industry, because in many other fields it is possible to increase sales, on condition, however, that the stock of machines in selected pro-export sectors is modernized.

The list of such pro-export sectors sent to the deputies in October 1983 was the first concept in restructuring the economy. The criteria of selection were not obvious to all of the deputies. Consideration was given to how these processes of "dying out" of some enterprises and "revitalizing" of others, leading to a change in the structure of production, were to proceed. It was expected, therefore, that there would be suitable management and stimulation instruments, and that these would be tied to a concentration of funds for the development of the chosen sectors. At one of the Commission meetings in September 1984, however, it was stated that the goal of the structuring of the economy was defined only verbally, but that it was not "indicated materially." Because of this it cannot bring results. This subject will soon return to the Commission's forum. Already in December, during the discussion on the 1985 plan, the concern of the deputies on long-range solutions in foreign trade became evident. In their opinion, emergency solutions dominated. On the other hand, the foreign trade office defended the concept which envisaged that balance will be achieved first, and then expansion. "First we must straighten the front line, and then march forward," Minister T. Nestorowicz said. At the same time, the Ministry of Foreign Trade presented the idea of a so-called "little restructuring." Today it may be said that the Ministry is consistently developing it as a program of cooperation between industry and foreign trade companies. The undertakings executed under this program benefit from various sources of financing, on preferential conditions.

It should be mentioned that after not quite two years from the time the Planning Commission drew up the list of pro-export sectors, the Sejm Commission on Economic Cooperation With Foreign Countries devoted an entire meeting to the subject of restructurization. Specifically, in March of this year the concept of the long-range pro-export development of the economy was discussed. And again the materials presented met with a certain skepticism on the part of the deputies. "The materials presented imbue me with great optimism," commented one of the deputies. "For years there has been nothing, and now suddenly we expect the growth of exports to triple. Other deputies called attention to concrete obstacles, e.g., limited production potential and delays in developing intermediate phases of processing. Thus, restructurization should encompass not just the producers of final products.

### Closer to Reality

A change in the economic structure, even if made consistently and without delays, will not bring results any earlier than the beginning of the 1990's. The deputies were in agreement on this. Therefore, any sign of inconformity between short- and long-term assumptions, which could push this time-frame even further into the future, disturbed them. In May of this year the Commission examined the variants of the National Socioeconomic Plan for the years 1986-1990 and the assumptions of the National Annual Plan for 1986. Past experience and reality again suggested doubt as to whether it will be possible to achieve an 8-11 percent growth of export in the machines and chemical industry, as variant 2 envisaged.

Discussions at meetings of the Commission for Economic Cooperation show that the materials prepared by the ministry are read very carefully by the deputies, and all statements which are too optimistic are taken with a large dose of salt. The above example, therefore, is not exceptional—many more of them can be cited.

For example, the information prepared by the Ministry of Metallurgy in 1983 for the meeting devoted to exports from the electromachinery industry was received very critically; on the one hand, it referred to a breakdown of contract agreements, and on the other hand a growth of as much as 20 percent in foreign sales was envisaged.

Frequently, the "sin" of the materials presented to the deputies by the administration lay in the fact that the information was incomplete, the statements were too general, and that conclusions were not drawn from the analysis of various aspects, e.g., in the organization of foreign trade and the concrete results of activities of foreign trade companies. One gets the impression, said one of the Commission's members, that all of the attention is focused not so much on methods for stimulating export as on explanations of why there is no export.

Another time, during a discussion on restructurization, one of the deputies accused the Minister of Foreign Trade of showing "an exaggerated loyalty to the solutions proposed by the government," which, nevertheless, do not ensure effectiveness. In turn, when the subject of the Commission's deliberations

was small-scale manufacturing, the Minister of Finance was accused of "interpreting statistics" in his own favor when calculating the profitability of Polonia firms.

Since we are giving examples of the deputies' critical comments, let us say that sometimes these were directed at the work of the foreign trade apparatus. Specifically, attention was called to the fact that often poor quality is used as an excuse to justify poor export figures in the foreign trade offices. At the same time, the Supreme Chamber of Control confirms the opinion that in entering into trade agreements, they do not always guarantee the good interests of the Polish side. This problem was also included in the conclusions which sum up the Commission's work.

Deputies from the Commission for Economic Cooperation With Foreign Countries do not have to, nor should they, use only the information supplied to them by the involved ministries. To become familiar with matters of exchange with foreign countries, visits to exporters and contacts with producers in their own areas are an important supplement. That is why it is somewhat surprising that Commission members so rarely make use of examples from their own backyards. It appears that not all of them are familiar with foreign trade problems at the point of their origin, i.e., from the enterprise side. Then it would be easier to understand the conflicts and seek effective and practical solutions, and also to demand and enforce solutions on issues which do not require decisions by higher authorities. Admittedly, the question frequently asked, "If things are so good, why are they so bad?" seemed to be very to-the-point and brought forth more relevant explanations.

It is impossible to list all of the problems raised at the Sejm Commission meetings. They included matters concerning guarantees to exporters that they will be furnished materials, matters relating to packaging, and often questions relating to farm-food exports were brought up. A great deal of time was devoted to the maritime economy: the shipbuilding industry and the shipping trade.

The members of the Commission for Economic Cooperation With Foreign Countries are finishing the current term having achieved a great deal. Nevertheless, many problems to be solved remain for the deputies of the next term.

9295

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POLAND

# DOMESTIC BANKS DEFEND CREDIT LIMITATIONS

Warsaw BANK I KREDYT in Polish No 2 Feb 85 pp 81-82

[Letter by Halina Jaszczyk from Kielce: "From Bank Experience and Practice  
—Is Carrying Out Credit Policy Expressed Solely in Limiting Credits?"]

[Text] Many enterprises answer the above question affirmatively while we, the bankers, speak and write too little about reasons for our actions, about selective credit policies, and preferences which we take into account in the implementation of the hard credit principle and tough financing. Often banks are regarded, in the borrowers' view, as, e.g.:

- oversensitive guardians of the credit plan, stingy with pennies
- interfering in their autonomy with regard to planning goals, means, and results, as well as distribution of profits and funds;
- responsible for their customers' financial difficulties and inability to pay their contractors, frequently labeling them as unreliable payers;

Accusations against banks have been expressed in various circumstances, different places, and before different audiences. They often meet with silent or vocal approval. In this situation we must defend ourselves against these charges with concrete economic arguments so that everyone interested in the national economy, and especially the borrowers, can better learn the premises for bank actions lest a bankrupt enterprise blame its insolvency on the bank credit policy. No borrower should entertain even a shadow of a doubt about the role of credit policy, on a macro scale as well as in relation to every economic unit—regardless of its size or rank—such as enterprises, institutions, cooperatives, or their branches. Of course, I have in mind credit policies that are carried out correctly; we should not be afraid of criticisms of such policies but regard it not only as misunderstanding of their reasons, but also a misunderstanding of the *raison d'être* of an enterprise.

Examples of charges raised against the banks should be answered as follows:

1. We are and will be overly sensitive. In giving credit we will be guided by the premises of the credit plan which has not regained its proper

importance in order to remain, as in the past, a paper document, not very well known by some; its purpose is to prevent further growth of so-called "humps" in our economy, especially in the money market, investments, and the balance of payments. Limited by the credit plan, appropriately directed by the money market policy, the supply of credit money to economic units and the population is supposed to liquidate "humps." It is proper for a bank to play a role in this through credit instruments. This does not mean that the bank limits the credit for all borrowers because neither the credit plan nor the premises of money-credit policy intend this. This is proved by credit policies applied by the branches of the bank to individual enterprises. Above all, enterprises are supposed to participate in putting the national economy in order, in achieving social and economic goals, and in implementing economic reform. Since the credit plan is an integral element of the Central Annual Plan it takes all this into account; the banks' role lies in providing the optimal supply of credit for what is needed, necessary, socially and economically justified, that is effective activity in the broad sense.

It is known that economic units do not live solely on credit; they have their own means, funds, and other, non-credit means to finance their needs. The bank takes all of these into account and must count them; through credit it can also demand growth of the enterprises' own means, in accordance with the premise of the economic reform which says that enterprises should gradually strive for full self-financing of current activities and partial self-financing of their growth. Can the enterprises increase their own means? They can and they should, for every year should bring them increasing "profits" as they develop and improve their effectiveness.

This premise implies that the share of bank credit should diminish, hence it should be limited. Absolute limitation of credit applies to units with declining economic effectiveness; credit is cut-off for units whose credit-worthiness has been jeopardized or lost and which are not able to undertake appropriate actions to recover it. A bank which reviews credit application by an enterprise must check its own and other means of financing, and determine the amount necessary for rational, purposeful, and effective activity. Only as a result of such calculation, which takes into account the possibility and need to find additional means through better use of existing reserves, can credit needs be ascertained and turnover credit granted. In every case so far, deficit of means needed by fully credit-worthy enterprises that lacked reserves has been fully covered by bank credit.

Banks are not stingy with credit money for supporting the correct activity of enterprises, from the point of view of social and economic goals, but they approve it only to the extent necessary for effective functioning. But banks will sternly limit credit, or refuse it altogether, for all units which function badly and are responsible for reducing the planned results.

2. Another charge concerns interference with the autonomy of enterprises. The banks do not interfere with borrowers' decisions. They may possibly

refuse to give as much credit as is requested, or may make it contingent on the quality of functioning. This happens when, e.g.:

- planned goals do not mobilize sufficiently, costs are overestimated, financial results and the means for financing of the enterprise are underestimated;
- possibilities of production and sale, on the domestic market and for profitable export, have not been fully utilized;
- employment remains the same, or is slightly lower, while the use of productive capacity has significantly diminished;
- consumption of materials, energy, or reserves in production is high, with merely symbolic or no improvement;
- productivity of labor does not follow wage growth;
- there are serious reservations about the structure of employment;
- buyers question the quality of production;
- high extraordinary losses reduce the results;
- accounting payment cycles exceed correct periods;
- own means are used for broad investment activities which are not always urgent or effective;

All of these negative phenomena, even appearing singly in some enterprises, in effect constitute reserves which, if used correctly, may influence the achievement of better economic results and higher degree of self-financing. The bank, seeing the necessity and possibility of proper utilization of such reserves, negotiates appropriate conditions of credit and sets the credit field.

Thus the bank does not correct enterprise plans or distribution of results but, through credit, mobilizes the enterprise to function optimally. This negotiated improvement in effectiveness of functioning translates into a higher credit worthiness of the enterprise in the future and better guarantee of repayment.

The borrowers ask whether banks, since they limit credit, care about interest. What we care about is correct functioning of credit, and interest on such credit.

3. Responding to the third charge, we can say briefly that financial and repayment difficulties of enterprises are primarily related to incorrect way of functioning. The bank neutralizes excess financial liquidity of borrowing units through credit, especially when exploitation of this situation causes further accumulation of negative phenomena in the national economy.

Not so long ago a "good" institution has been created—negotiations conducted with the units before loan contracts are signed. These negotiations should now be increasingly better used for the economic justification of banks' activities.

Surely, my thoughts are not a revelation for bank employees, but the point is that neither should they be a revelation for our borrowers.

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POLAND

**PERSONNEL CHANGES IN FOREIGN TRADE SECTOR**

Warsaw RYNKI ZAGRANICZNE in Polish No 119, 28 Sep 85 p 8

[Text] Ludwik Adler, born 5 April 1927 in Piotrkow Trybunalski, was appointed managing director of THM EXIMPOL as of 1 July 1985.

He graduated from the Main School of Planning and Statistics (MSP&S) and began his professional career in 1947. He has been employed in the foreign trade office since 1965. His last position was managing director of ANGLODAL Company in London.

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Andrzej Rynel, born 18 November 1937 in Warsaw, was appointed counsellor in the foreign trade department of the CEMA Secretariat in Moscow as of 24 July 1985.

He is a graduate of Jagiellonian University, began his professional career in 1961 and has been employed in the foreign trade office since 1964. His last position was manager in the Polish Chamber of Foreign Trade.

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As of 26 July 1985, Jan Dkajczyk, born 28 February 1933 in Czestochowa, was appointed director of the FTE (Foreign Trade Enterprise) UNIWERSAL representation in Belgrade.

He is a graduate of MSP&S, began his professional career in 1956 and has been employed in the foreign trade office since 1967. He was formerly department manager in FTE UNIWERSAL.

\* \* \*

Mirosław Grabowski, born 3 March 1931 in Torun, was appointed commercial attache in the Commercial Counsellor's Office in the Polish Embassy in Budapest.

He is a graduate of MSP&S, began his professional career in (illegible) and has been employed in the foreign trade office since 1957. He was formerly assistant office manager in FTE METRONEX. His appointment is effective 30 July 1985.

Effective 14 August 1985, Zofia Gaber-Sobieralska, born 24 January 1938 in Gorlice, was appointed managing director of FTE AGROS.

She graduated from MSP&S, began her professional career in 1961 in the office of foreign trade, and was formerly office manager of FTE AGROS.

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Effective 19 August 1985, Hipolit Lipinski, born 4 June 1928 in Sawice, was appointed deputy director of the currency department in the Ministry of Foreign Trade.

He is a graduate of MSP&S, began his professional career in 1949 and has been employed in the office of foreign trade since 1958. He was formerly commercial attache in the Polish Embassy in Belgrade.

\* \* \*

Effective 26 August 1985, Andrzej Golebiowski, born 9 November 1934 in Warsaw, was appointed manager of CEPELIA Nederland B.V. Company in Utrecht.

He is a graduate of the Central School of Agriculture and has been employed in the office of foreign trade since 1961. He was formerly office manager in FTE COOPEXIM.

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Effective 1 September 1985, Marek Brzezinski, born 12 January 1946 in Legonice, was appointed commercial attache in the Commercial Counsellor's Office of the Polish Embassy in Bonn. His employment will be in the Cologne office.

He is a graduate of MSP&S, began his professional career in 1968 in the office of foreign trade and was formerly chief specialist in the Ministry of Foreign Trade.

\* \* \*

Effective 15 September 1985, Zygmunt Kolodziej, born 11 September 1939 in Wloclawek, was appointed consul in the Polish Consulate General in Leningrad.

He is a graduate of Gdansk Polytechnic, began his professional career in 1957 and has been employed in the office of foreign trade since 1985. He was formerly department manager in the PZPR Provincial Committee in Gdansk.

9295

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POLAND

#### ENTERPRISE MANAGERS POLLED ON REFORM

Warsaw RZECZPOSPOLITA in Polish 19 Sep 85 supplement REFORMA GOSPODARCZA  
No 61 pp 1, 4

[Report on poll results prepared by Pawel Karpinski]

[Excerpts] Prior to the Party-Economics National Conference (Poznan, 31 May-1 June 1985), a poll of enterprise managers was conducted. Its purpose was to obtain the following information:

—the degree of utilization and the effect of new institutional solutions and economic instruments applied, on enterprise production and development activity,

—an assessment of selected elements of the new system under which the economy is functioning and how this system can be improved.

As a result of the poll, opinions and assessments from 893 enterprise managers have been obtained on these questions. The answers were processed in the Computer Sciences Department of the Institute of Organization Management and Cadre Training, which facilitated an in-depth analysis of the results. The conclusions arising from these analyses were one of the factors taken into account in the drafting of institutional revisions aimed at increasing effectiveness in the implementation of basic socioeconomic goals during 1986-1990.

In the polling sample, industrial enterprises constitute 62.7 percent of the total, i.e., approximately 15 percent more than the industry sector share in the generated national income.

The branch structure of the sample of industrial enterprises shows a high degree of convergence with a similar structure for industrial enterprises as a whole. It may therefore be assumed, in analyzing the results obtained, that in the case of industrial enterprises the polling sample is representative.

In the polling sample, 68 percent of all of the enterprises, and 71 percent of the industrial enterprises, paid an average monthly salary in the 14,000 to 18,000 zlotys range.

## A. Employment and Salaries

1. Approximately 74 percent of the managers are of the opinion that an intraplant economic system has been instituted in the enterprises that they manage, making it possible to determine the effect of particular organizational units and workers' groups on the economic results achieved by the enterprise; however, 23 percent of the managers said that no such system has been developed.

The lowest percentage of enterprises in which, in the opinion of the managers, an intraplant economic system has been instituted which makes it possible to determine the effect of particular organizational units and workers' groups on the economic results achieved by the enterprise, is in the farm-food industry (61.7 percent), followed by the fuels-energy industry (66.6 percent), and light industry (68.8 percent).

2. Over 89 percent of the managers believe that the workers in the enterprises they manage always know to what degree their salaries depend on labor productivity, quality, and thrifty use of materials.

3. Approximately 91 percent of the managers polled believe that the institutional solutions in place, and the economic mechanisms applied, are directed towards improving the management of the labor factor in the enterprise; 8 percent of the managers expressed a different opinion.

4. A definite majority (over 93 percent) of the managers believe that an improvement in the utilization of the labor factor has been made in the enterprises that they manage; Only slightly over 5 percent of the managers believe that such an improvement has not occurred.

In the case of 55 percent of the enterprises, a drop in the share of administrative workers in total employment occurred during 1982-1984; in 32 percent of the enterprises, no changes in this area occurred; in 12 percent of the enterprises, this share grew.

5. The managers have a negative opinion on state-control of employment, applied in certain provinces in the form of compulsory job referrals; only 15 percent believe that this contributes to an improvement in the employment problem in enterprises.

6. The managers have a decidedly positive opinion on regulations governing plant wage-and-salary systems. Over 80 percent of the managers believe that they make it possible to introduce incentive systems into the enterprises, tying wages to the quality and quantity of the work done. In 1984, 24 percent of the enterprises instituted such systems, and another 51 enterprises said that they would institute such systems this year. Only 3.5 percent of the enterprises do not intend to apply such systems.

7. Almost 87 percent of the managers are of the opinion that the role of profit in the management-cadre incentive system should be increased; only 9 percent of the managers have an unfavorable opinion on this proposal.



In all branches (sectors), a decided majority—from 82.5 percent in light industry to 95.2 percent in trade—of the managers are in favor of increasing the role of profit in the management-cadre incentive system.

8. The opinions of the managers on the advisability of tying prizes out of profits more closely to the size of the profits, differ; about 46 percent of the managers believe that such a linkage is advisable, while over 38 percent of those polled believe otherwise.

Replies among the branches vary greatly. A larger percentage of managers expressing themselves in favor than the percentage of managers expressing themselves not in favor appeared in transportation and communication (in favor, 59.5 percent; not in favor, 23.8 percent). In trade, the figures were 61.9 and 28.6 percent, respectively. In the remaining branches of industry, 54.6 percent gave favorable replies, 36.4 percent unfavorable replies.

On the other hand, the percentage of managers expressing themselves against the proposal is higher than the managers expressing themselves for the proposal in the chemical industry, where the negative replies totaled 55.6 percent and the positive replies, 35.6 percent; fuels-energy (51.8 percent in favor, 29.6 percent against); and construction (48.6 percent in favor, 38.1 percent against).

#### B. Control of Raw and Other Materials

9. Almost 60 percent of the managers are of the opinion that the present rules on compulsory intervention in turnovers of materials should not be retained during 1986-1990; 31 percent believe that they should be retained, and 9 percent have no opinion.

Depending on the branch, the share of negative replies varies widely: from 46.8 percent in the food industry to 75 percent in the wood-paper industry.

10. Opinions on the functioning of the government-order system are not uniform. Approximately 40 percent of the managers believe that the method used to place government orders contributes favorably to better improvement of raw and other materials; on the other hand, 33 percent of the managers have an opposite view. Of the enterprises polled, 44 percent have filled government orders.

The large percentage of managers who have no opinion on this subject is striking. Opinions on the efficiency with which the government-order system functions also differ. On the one hand, over 33 percent of the managers believe that the system is efficient, on the other, approximately 57 percent believe otherwise.

11. Most (69 percent) of the managers believe that the regulations which specify the general conditions of contracts between units in the socialized economy are adequate for the national economy to function correctly; 26 percent of the managers hold an opposite view, and 5 percent have no opinion.

### C. Management of Capital Assets and Investment Activity

12. Approximately 88 percent of the managers believe that the conditions under which their enterprises operate (limitations of production factors, difficulties in obtaining credit, the negative impact of disinvestment of production assets, and others), make it necessary to improve the utilization of production assets.

Almost 36 percent of the managers said that the enterprises they manage sold unessential or idle machinery and equipment to other organizations, while 50 percent of the enterprises sold part of these machines and equipment.

13. Almost 24 percent of the enterprises manufactured by-products for the market, 12 percent intend to undertake such production, while 64 percent have not manufactured such by-products and do not plan to do so.

The large percentage of enterprises which do not intend to undertake byproduct production is striking.

14. Plant management teams operate in 7 percent of the enterprises; 25 percent intend to organize such teams. Almost 44 percent of the enterprises said that they are not able to organize such teams, and 24 percent said they do not intend to do so.

15. Only 36 percent of the managers believe that their enterprise makes enough profit to allow for indispensable modernization and expansion. In 44 percent of the enterprises, the amount of profit, in their opinion, is definitely not enough to conduct this kind of activity.

16. Almost all of the enterprises polled were involved in capital investment projects during 1982-1984.

Approximately 21 percent of the enterprises undertook capital investment projects jointly with other enterprises in order to improve production or improve the flow of raw and other materials; 23 percent of the enterprises plan to undertake such activity and 55 percent have not undertaken it and do not plan to do so.

Over 65 percent of the managers believe that the enterprises ensured high efficiency and effectiveness of capital investment processes; 17 percent did not share this view, and the remainder had no opinion.

Over 43 percent of the managers are of the opinion that existing legal regulations provide adequate conditions for improving the effectiveness of outlays and the efficiency of investment processes; on the other hand, over 40 percent of the managers believe that the legal regulations do not provide such conditions. The remaining managers had no opinion on this matter.

17. Over 45 percent of the managers believe that specialized banks should be established to handle credits for expansionist ventures in fields which affect changes in the structure of the national economy (export, electronics, small-

scale production), 33 percent of the managers do not support this proposal, and 20 percent have no opinion on this matter.

18. Almost 40 percent of the managers believe that enterprises should be given the ability to accumulate funds to finance endeavours of high public usefulness (e.g., in the field of services, municipal management, trade, etc.) by issuing bonds; 26 percent of the managers do not share this view, and 35 percent have no opinion.

The high (almost 35 percent) percentage of managers who take no unequivocal position on this matter is noteworthy.

Further results on the poll will be published in coming issues.

9295

CSO: 2600/51

POLAND

# REPORT ON STATUS OF CHINESE ECONOMIC REFORMS

Warsaw RYNKI ZAGRANICZNE in Polish No 119, 3 Oct 85 p 2

[Article by (WEG): "The Countenance of Chinese Reforms"]

[Text] For several years we have been observing the evolution of the Chinese economy with great interest. There is no doubt that the transformations which have been occurring in this area since 1978 have changed its countenance to a far greater degree than the entire previous period of the existence of the Chinese People's Republic, which is now observing its 36th anniversary.

According to popular opinion, the Chinese economy is now better than it has been for decades, as shown by the rising growth rate of industrial and agricultural production (last year the growth rate in those sectors was greater than 13.5 percent), and by the noticeable improvement in the standard of living. Preliminary figures on the reforms being made, based mainly on the decentralization of production and management and the ever-wider popularization of market-finance mechanisms, are extremely good. But this does not mean that this process is taking place without difficulties and disruptions.

Figures from the past six months have given cause for a certain anxiety. During this period the extreme growth rate of industrial production (on the order of 23-25 percent) revealed some old weak points in the Chinese economy--inadequate infrastructure and transportation, lack of energy and raw materials--plus the new problems which a very rapid process of economic reformation and restructuring brings with it.

The broad powers granted to the authorities of the particular provinces and the managements of the larger production units, who were not fully prepared to implement such a comprehensive reform program, brought about a considerable laxity in credit and wage policies (driving up the inflationary spiral), an unwarranted growth in foreign-exchange expenditures (a \$7 billion foreign-trade deficit in the first half of this year may increase to \$18 billion by the end of 1985), and a constant increase in the disproportions among the particular sectors.



More and more, therefore, the need to "cool down" the overheated Chinese economy and return to a more balanced and stable development is being indicated. The economic authorities have already made some revisions in the development plans, at the same time emphasizing the strengthening of state control of investments and import. But this in no way means that the process of reforms will be slowed down or that the directions of these reforms will be changed.

Many specialists, in observing the changes in the Chinese economy in the last 2 to 3 years, express the opinion that maintaining the present direction of the evolution may bring about important changes in the socialist economic system of the Chinese People's Republic. The reasons given include the high growth rate of the private sector, the process of returning state enterprises to private ownership, the introduction of joint-stock systems for employees, and finally, the growing share of foreign capital in this country's economy.

The Chinese authorities say, however, that the economy of this country will continue to have a socialist character, although undoubtedly it will have a specifically Chinese countenance.

9295

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POLAND

#### SOVIET IMPORTS AID CONSUMER DURABLES MARKET

Warsaw RZECZPOSPOLITA in Polish 6 Aug 85 p 2

[Text] Import shock. The market is being normalized. At long last, normal sales of refrigerators and washing machines. Just a year ago, every delivery of refrigerators or washing machines was causing long lines led by professional "line standers." We in RZECZPOSPOLITA prophesized, already at that time, that large imports from the USSR must result in market normalization. Our prophesy came true: today the goods are waiting for customers and not the other way around.

In most stores, the "white technology" can be bought without restrictions, the threatening signs "Only the M credits accepted" are gone. Those who invested their "venture capital" in automatic washers and refrigerators are very disappointed. Soon there will be ads offering items below store prices; how long can one store equipment without using it? The guarantee is nearing its expiration date....

During the first 6 months of this year, we imported over 266,000 refrigerators from USSR, i.e. more than ever before. Most have the capacity of over 200 liters. Soon, the Soviet deliveries will be supplemented by a new model, Saratov, which has the capacity of 140 liters and the, so called "module" outside dimensions that fit kitchen furniture.

A true success story on our market is that of the washing machine "Wiatka," made in the USSR under license of the Italian company "Marloni." During the first 6 months of this year we received almost 55,000 units and the total planned for this year is 100,000 units. Significantly, import of units is accompanied by import of spare parts. Zdzislaw Burski, director of the Import Office for Market Products "Universal," assured a RZECZPOSPOLITA reporter that deliveries of parts fully cover the demand to the extent that we do not use the total quota allowed in the trade agreement with USSR. More difficult is to buy the Czechoslovak automatic washer, "Tamat 500." Of 50,000 units ordered for this year, 24,700 units were received during the first 6 months. Those who cannot afford a rather expensive automatic washer, can purchase a rotary washing machine imported from the GDR (about 48,000 units this year) or from CSSR (50,000 units). Trade specialists at the "Universal" assure us that the current high level of import of washers will be maintained in 1986. Additionally, a search for more suppliers within CEMA continues.

The demand for freezers has not been satisfied yet. So far, the only foreign supplier is the GDR, whence we imported 49,000 units this year. The needs, however, are much higher and only additional sources of supply could bring market equilibrium next year. On the side, we note that "Universal" declared that at the end of the third quarter or at the beginning of the fourth, a Bulgarian rotary fruit processor should appear in stores (35,000 units). This, however, may have missed the boat since the fruit season ends in September.

Import of floor polishers is not anticipated, although they could be bought abroad. The reason is simply that domestic retailers are not ordering polishers because...there is no demand for them. Hard to believe. It is enough to see the scenes in the stores where the made in Poland polishers occasionally appear (by the way, their quality is not too good).

8801/12379  
CSO: 2600/1013

POLAND

## TRANSPORTATION INDUSTRY SUBSIDIES EXPLAINED, DEFENDED

Warsaw PRZEGLAD KOMUNIKACYJNY in Polish No 3, Mar 85 pp 69-73

[Article by Romuald Bauer, Janusz Ostaszewski: "The Subsidizing of the Overland Transportation Enterprises"]

### [Text] The General Issues of the Subsidizing of Enterprises

The issue of broadly understood subsidies currently belongs to the most sensitive and controversial problems of the system of management of the national economy; included among them is transportation, for which the necessary aid from the state is relatively large.

The sole fact that the system of subsidies has become a sensitive issue must be considered a positive phenomenon, because it attests to the growth of the role of economic categories. The fact that many of the solutions are controversial must be viewed less optimistically. With this is connected the question of the stability of the adopted solutions. This interdependence is growing and the unsatisfactory solutions must be changed. The changeability of the economic-financial rules must be evaluated negatively because it prevents enterprises from carrying on a longterm stable strategy.

We are talking about a broadly understood system of subsidies, because various kinds of reliefs in payments to the state budget have an impact upon an enterprise. They also increase the financial possibilities (monetary resources) of the enterprise. A complex treatment of all the factors which influence the financial situation of enterprises in the relation of the enterprise versus the state budget is, however, possible only on the scale of the whole economy. Only on this scale can one evaluate the process of the redistribution of financial means.

When limiting ourselves to only one side of the issue, namely, the system of subsidies, one must distinguish subsidies connected with investment activity relating to infrastructure, from subsidies built into the system of the current steering of production of particular enterprises or branches of the national economy.

In this article we shall analyze mainly this second kind of subsidy, the need for which is generated by a certain price policy which excludes the possibility of the self-financing of enterprises. One often has the impression that a



subsidy is treated as a phenomenon characteristic of the socialist economy. This is not correct. The participation of budgetary sources in the financing of transportation is not a new phenomenon in Poland or abroad. As the author of the "Modern economics of transportation" writes: [...] in all countries the public money assigned to transportation is considerable and will certainly remain the sum of various, rather arbitrary decisions, made for political, historical, emotional and financial reasons, often supported by mistaken notions of the function of transportation."<sup>1</sup>

The above statement refers to the share of the budget subsidies in the financing of the infrastructure of transport, which requires very large financial outlays and at the same time fulfills many additional functions (besides transportation). The participation of budget outlays in the financing of the infrastructure of transportation raises no objections and is socially accepted.

On the other hand, the participation of the state budget in the financing of the current activity of transportation enterprises generates many objections and controversies, which will be pointed out in our article in a comprehensive way.

The literature on this subject<sup>2</sup> includes the following basic expenses in the state's financing for the losses of economic organizations: object subsidies, subject subsidies, and goal subsidies. In practice it very often occurs that the distinctions between particular subsidies occur only in the verbal sphere, while functionally these expenses fulfill above all the role of the subject subsidy. For this reason, to keep this analysis very clear, we shall present a short description of the basic kinds of state expenses for the financing of the losses of economic organizations.

The object subsidy is of price-forming character for the producer of the article or service covered by the subsidy. If the state, due to the policy it realizes, establishes a price paid by the consumer at the level which does not cover the justified costs, increased by an appropriate surcharge of accumulation, then, according to the principle of the self-financing of economic units, it must introduce two sets of prices: a price for the producer and a price for the consumer. The price for the producer will, therefore, be a sum of the price paid by the buyer for the article or service (without the possible margins of profit) and an appropriate rate of the object subsidy. The object subsidy is the reverse of the revolving tax, which also is price-forming and is applied when the market price is much higher than the price obtained by the producer. For this reason the object subsidy ought to be known to the producer at the moment in which production begins. In order to make the economic calculus, the producer must know the basic economic parameter, i.e., the price to be obtained for the goods and services sold. In setting the rates of object subsidies, all the requirements of prices as the basic elements in the parametric system of management ought to be met. The subsidy ought to be flexible and external. The flexibility of the object subsidy should reflect the priorities of the central authorities in relation

to the priority directions of action. The external character of the subsidy must assure that the enterprise's lack of good management will have no direct influence on the size of the subsidized sums.

A characteristic feature of object subsidies ought to be the principle of setting equal rules for granting the subsidy to all the producers of a given good or service covered by the subsidy. If there is a differentiation in the rates of object subsidies for particular enterprises, depending on the level of the enterprise's own costs of production of these goods or services, the subsidy changes its character from an object subsidy to a subject subsidy. Object subsidies can be granted to enterprises only for strictly defined goods or services.

Another form of subsidy for the financing of the losses of enterprises are subject subsidies granted for compensation of the enterprise's balance losses. Both subject and object subsidies correct the enterprise's financial result. An enterprise receives the subject subsidy in an absolute sum up to the amount of losses actually suffered, not exceeding, however, the planned loss. When the actual loss is higher than the planned one, the enterprise receives a subsidy only in the amount of the planned sum, and when the actual loss is higher than the planned one, it receives the amount of the actual loss.

Goal subsidies, which are also subject subsidies, can be used by enterprises whose earning capacity does not permit them to create goal funds from their profits in the amount that would allow them to meet certain financial obligations.

A goal subsidy differs from a subject subsidy in that it has no direct influence on the changing of the financial result.

The enumerated kinds of state expenses for the financing of the losses in the economic activity of enterprises constitute a form of a direct subsidizing of those enterprises. Besides subsidies, one must take into consideration a second sphere of the participation of the state budget in the financing of the activity of economic units. Here belong various types of reliefs in the obligatory payments to the state budget, which can replace subject subsidies, and in their nature they can be close to goal subsidies.

#### **Systemic Solutions Regarding Subsidies to Enterprises**

During the period of the creation of new principles of the functioning of the national economy, the subsidizing of the activity of enterprises stirred many discussions.

Among extreme views one must count those according to which, on the one hand, there is a need for the elimination of any object and subject subsidies, and on the other, it is necessary to maintain the current solutions, that is, the subsidizing of the object sale of nonprofitable goods and the object financing of enterprises showing losses. The majority of voices opposed, however, the use of such a broad policy of subsidies.

The postulates called for a drastic curbing of the sphere subsidized by the state, because in that sphere the deformation of the economic-financial system and economic calculus is the easiest.

If one accepts the principle of the self-financing of enterprises as the basis of the new economic-financial system, the price policy ought to be focused mainly on the economic functions of prices, and only to a minimal extent on their social functions. In connection with the above, there was a call for the need for a consistent realization of the principle that what is necessary for the functioning of an individual and family in society ought to be secured by the policy of the minimum wage, family allowances, retirement and other pensions, and free services (for collective consumption).

The opponents of the use of subsidies in transportation believed that price tariffs should not be an instrument of social policy, the manifestation of which is the developed system of price reliefs, particularly in passenger transportation, whose rates reflect only partly the share of the costs of the transportation services. In the realization of a social policy the state ought to make use of other instruments of influence, and transportation ought to be finally free from realizing the functions of higher utility. The use of subsidies makes it difficult to carry out the economic calculus as the basis for the undertaking of decisions, and the state budget must necessarily act as a suction and force pump, making crazy transfers from one branch of the economy to another.

This view is certainly extreme. In the majority of nations (not only socialist ones), in which the state owns the means of transportation, it uses this property for the realization of social policy goals.

One can doubt, on the other hand, whether the system of reliefs in Polish transport realizes a social policy. The above question can be answered in the affirmative if we assume that the goal of a social policy is, generally speaking, the protection of the economically weakest groups of the population and not the granting of privileges to social groups which do not belong to the economically weak social groups.

The solutions concerning the mechanisms of the functioning of the economy, proposed by the authors of the reform represented a compromise between the various views and attitudes.

Namely, in the systemic solutions defined in the directions of the economic reform it was anticipated that subsidies would be given from the budget in the cases when goods and services were produced and sold below the enterprise's own costs; this, however, was to be treated as a special exception, and not as a rule. In the conditions of financial independence and self-financing the principle of the earning capacity of production and the elimination of subsidies ought to be enforced, because they are unjustified from the point of view of the correctness of the economic calculus, as well as of social justice. For these reasons object subsidies were seen as a necessary evil in



the conditions of a set level of prices. Systemic solutions also allow for subject subsidizing of enterprises showing losses, but this is connected with the evaluation of the activity of enterprises and activity aimed at the improvement of the economy of enterprises. Moreover, in the "Directions of the Economic Reform" it is stated that enterprises working in particularly difficult material conditions or operating uneconomical production apparatuses or working in bad locations, and in connection with the above, showing production costs much higher than average, causing their permanent deficit, can receive from the budget, in the transitory period, special object subsidies (rather subject subsidies--the authors' note), equalizing the conditions of the start. In accordance with the decisions of the Central Yearly Plan for 1984, defined in schedule No 3 to Resolution 169 of the Council of Ministers of 2 December 1983, the rates of object subsidies will be defined together with the setting of the official price in the uniform amount for all the producers of goods and services covered by the subsidies. In exceptional cases, due to the need for maintaining a certain production, for a given period it is allowed to use object subsidies (rather, subject subsidies--the authors' note) for producers with high production costs in the sphere of official prices and for a newly started production as a result of the realization of government orders, for research and development work, and also for newly started production ordered by the parent organ. In justified cases object subsidies can be granted for products for which regulated prices are set. The principles of granting object subsidies are regulated by the Resolution of the Council of Ministers No 63 of 6 June 1983. In accordance with the decisions of the resolution, the list of products covered by object subsidies is defined by the regulations on the draft state budget for the given year. Object subsidies are granted from the credits of the central budget, within the limits of sums anticipated by the budget resolution. The rates of object subsidies are defined mainly in the percent of the value of the sale of the goods in sale prices or in a sum from a unit of the article. On the strength of the cited resolution, the Finance Minister, setting the yearly rate of the object subsidy can, taking into consideration the level of the earning capacity of the subsidized production, authorize an appropriate minister to differentiate the rates of object subsidies for subgroups of products and for particular economic units. When defining the rate of the subsidy, the Finance Minister has the duty to supply the information about the standard profit for the activity covered by the subsidy. This is important because in the case when the enterprise earns a profit exceeding the rate of the standard profit, plus 50%, the surplus is to be transferred to the state budget. Apart from object subsidies, enterprises could in 1984 receive subject subsidies given:

--with relation to enterprises approaching the planned production capacity,

--within the framework and on the principles defined in the resolution of 28 June 1983 on the improvement of the enterprise's economy and bankruptcy,

--for the financing of defined tasks commissioned from the enterprise by the parent organ or for the financing of some costs of the enterprise's activity, independent from the changes in the production size.



Beginning with 1984, systemic solutions give a more object character to the subsidies than in the previous years. This is attested, above all, by the entry in the Central Yearly Plan for 1984, that the rates of the subsidy will be defined together with the setting of the official price, in the uniform amount for all the producers of the goods or services covered by the object subsidy, no matter what the individual level of the costs. However, on the strength of Resolution No 63 of the Council of Ministers, there exists a possibility of the subject differentiation of the rates. This entry cannot be negated outright, because objective external conditions in which enterprises function can justify such a differentiation. One must bear in mind, however, that the term "objective conditions" is a very broad concept and that in practice it can be distorted. Such an entry creates the danger that object subsidies, losing their strictly object character, can cover the costs of poor management. It seems that from the point of view of the purity of solutions and in the fear of a deformation, the rates of object subsidies should not be subjectively differentiated. The desired result in the elimination of the differentiated unremunerativeness of enterprises, if it is necessary, can be obtained by other methods, for example, by reliefs in the income tax.

Analyzing the systemic solutions presented above, one can note a positive trend in changing the socioeconomic content of this category. While previously a subsidy served to equalize the level of the remunerativeness and in this way leveled both the results of the faulty price system and of the enterprise's mismanagement, in the new system it is to express certain social priorities for a defined direction of production and consumption.

Thus the range and form of the direct participation of the state budget in the financing of the activity of enterprises has been diminished. The new mechanisms, however, have expanded the range of the indirect financing of enterprises by the state budget. This is dangerous insofar as the system of reliefs (income tax, state fund of vocational activization payments, and amortization) do not allow for a proper formation of the economic policy. The large number of authorities granting the reliefs, together with the large number of titles for reliefs make particular decisions wrong. Particularly, the egalitarian tendencies of the state vocational amortization fund demoralize, thus have many negative features, common for the subject subsidy.

#### **The Economic Policy Regarding the Subsidizing of Transportation Enterprises**

Generally speaking, self-financing in the overland transportation industry is not total. In the years 1982-1983, there were two increases in the transportation tariffs. As a result of those hikes, only the auto transport trade tariff is profitable, while the railroad tariff shows a deficit of about 11 percent, taking into consideration the hike in 1984. Passenger tariffs are also in deficit, despite their hike in 1983 by about 100 percent and another one in 1984 by 50 percent.

In 1983, object subsidies in railroad transportation amounted to 43.9 billion zlotys in passenger transport and 43.9 in the transport of goods, respectively; in auto transport, object subsidies concerned only passenger transport and amounted to 13.1 billion zlotys.

Comparing the years 1982 and 1983, one must notice that in order to achieve a more effective realization of the principle of hard financing and to create the conditions for an economic enforcement to improve the efficiency of management, the range and scale of the subsidizing of the enterprises of the auto transport were being consistently reduced. In comparison with 1982, the subsidies for the auto transport declined by 70 percent. One cannot draw an analogical conclusion with regard to the PKP [Polish State Railroads], for which subsidies in 1983 amounted to nearly 83 billion zlotys and in comparison with 1982 increased by nearly 14 percent.

The manner of granting subsidies for transportation generates many controversies. One often hears the opinion that the appropriate regulations which are in force have very little to do with the spirit of the reform and constitute an obstacle to initiative.

Above all, the quota limiting object subsidies were criticized. In practice, this meant that despite the needs (increased number of courses, and opening of additional connections) they could not be met because a defined amount of the subsidy was an obstacle.

In the years 1982 and 1983, transportation enterprises taking advantage of object subsidies also did not enjoy stability in financial conditions for leveling off the deficit in transport. The system of subsidies used in those years was ad hoc and inconsistent. The rates of subsidies were set by the Minister of Finances after a long delay. They often underwent retroactive changes. For example, in 1983 three changes of rates for the PKS [State Auto Transport] took place, the last one, in November, in effect from January 1983.

One can observe certain positive changes in the subsidizing of transportation enterprises in 1984. The decisions of the Finance Minister regarding the rates of object subsidies for PKS and PKP enterprises were issued in the first half of 1984. For the enterprises of the State Auto Transport the Finance Minister set an average rate of object subsidies for passenger transport of the following types: general access, normal, with commuter monthly tickets, and student tickets in the amount of 86 percent, taking into consideration the rate of the standard profit in the amount of 4 percent of the own profits of the subsidized services. The rates of the object subsidies for passenger transport refer to the amount of revenue from the sale of tickets, including the revenue from chartered school transport. The Finance Minister authorized the Minister of Transportation to differentiate the average rate of object subsidies for the particular kinds of subsidized services for particular enterprises of the State Auto Transport with the condition, that the average of the differentiated rates, calculated for planned sale, cannot be higher than the rate of 86 percent. The letter of the Finance Minister did not define the limit of state subsidies for the enterprises of the State Auto Transport, but in accordance with the statute on the financial economy of state enterprises, enterprises can receive from the budget a subsidy in the amount established in the budget statute. The amount of the realized object subsidies in 1984 undergoes a curtailment in the case when the planned outlays for the purchase of the auto stock have not been fulfilled, by the unfulfilled amount.

In his decision, the Finance Minister created a certain barrier to the excessive consumption of the profit. This barrier, understandable from the point of view of the central authorities, is a certain limitation on the independence of the enterprise in the distribution of the profit. Setting the medium rate of object subsidies, the Finance Minister in his decision also defined the reliefs in the income tax, which play the role of indirect object subsidies.

The Finance Minister granted the enterprises of the State Auto Transport reliefs in the income tax in the amount of 2772 billion zlotys. A considerable part of this relief was assigned for the payment of investment credits. PKS enterprises are steeped in debt. According to the status for 31 December 1983, the debts of the PKS amounted to 25.5 billion zlotys, out of which over 19 billion were due to investment credits. The Finance Minister, flexibly taking advantage of the mechanism of reliefs in the income tax, brought about an indirect participation of the state budget in the financing of the debts of the enterprises due to investment credits. The form of the indirect subsidies must be viewed positively, because if indirect subsidies were granted for the payment of investment credits first, and then a certain part of the money was taken away as income tax, this would unnecessarily complicate mutual accounting. The second part of the relief in the income tax was assigned from the increase of the development fund in the PKS enterprises. However, the Finance Minister in the quoted letter tied the full realization of the relief to the degree of exceeding the planned profit for distribution. The exceeding of the planned profit for distribution by 15 percent will not cause a curtailment of the relief. Each excess higher than the above from the planned profit for distribution causes a curtailment of the tax relief in the amount equal to 50 percent of the excess. This seems to reflect an unnecessary fiscal stringency. On the one hand, the interest of the state budget is understandable, which in the case of an improvement of the financial situation of the subsidized enterprises can reduce a part of the relief in the income tax. On the other hand, one may fear that enterprises will be discouraged from increasing the basic index, that is, profit. On the basis of the received letter, the Minister of Transport in April 1984 divided object subsidies and reliefs in the income tax for the enterprises of the State Auto Transport. The just principle of not differentiating the rates of subject subsidies between particular enterprises was adopted. The equal rates for all enterprises are: 47 percent for general-access ordinary transport—47 percent, 145 percent on the basis of monthly commuter tickets, and 9.35 percent for student tickets. The above rates take into consideration the rate of the standard profit in the amount of 4 percent from the planned own costs of the subsidized services.

The Minister of Transportation authorized the directors of PKS enterprises to differentiate the rates of object subsidies for particular districts and divisions, within the framework of the rates established for enterprise. At the same time the Minister of Transportation divided the reliefs in the income tax among particular enterprises, assigning them for the payment of investment credits and for increasing the profit for distribution. It ought to be added that the decision of the Minister of Transportation was public and made known to all PKS enterprises. In June 1984, the Minister of Finances issued a decision on object subsidies for PKP enterprises. In this decision the percent rates of subsidies for services in domestic transportation and in



passenger and freight transport were established. The established rates reflect the rate of standard profit in the amount of 2.73 percent of the enterprise's own costs, and for passenger transport the rate of standard profit amounts to 4.00 percent. The amounts of the due object subsidies are reduced by the amounts of the unfulfilled planned outlays for purchases of the automobile stock. Reliefs assigned for purchases of the railroad rolling stock were also granted. Similarly as in the case of the subsidies for the enterprises of the auto transport, also in the railroad transport the mechanism of direct and indirect subsidies, expressing the preferences of the central authorities in undertaking certain actions, is used.

#### FOOTNOTES

1. J. M. Thomson, "Nowoczesna ekonomika transportu," Warsaw, WKL, 1978.
2. J. Kaleta., "Gospodarka budżetowa," Warsaw, PWE, 1980.
3. In our analysis we are not taking into consideration the fact that the category of the minimum wage transformed itself, as a result of various decisions, from a category of a social policy into an economic-political category.
4. F. Grzywacz., "Zarządzanie przedsiębiorstwem transportu samochodowego," Sopot, 1981.
5. The Council of Ministers resolution No 63 of 6 June 1983, on the principles of the granting of object subsidies, M. P. No. 21.
6. "A report on the process of the implementation and results of the economic reform in 1983," The Government Plenipotentiary for the Economic Reform, Warsaw, 1984.
7. Compare, for example, W. Morawski, "Reforma gospodarcza w transporcie--proba oceny oraz zadania Zespołu ds Transportu Komisji Reformy Gospodarczej. PRZEGLĄD KOMUNIKACYJNY, 1983, No. 10.
8. For the payment of the debts for 1984 made as investment credits prior to 1982, the budget applied a mixed form of financing. For this purpose a relief was granted in the income tax, in the amount of 1939 billion zlotys, and a goal subsidy in the amount of 2,0 billion zlotys, which directly increased the enterprise's development fund.

12270

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POLAND

COAL PRODUCTION PROGRESS REPORT: JULY 1985

Warsaw ZYCIE WARSZAWY in Polish 1 Aug 85 p 2

[Text] Miners made up for a day missing in...the calendar.

Shortage of freight cars means coal stored at the pits. Energy workers are getting ready for the autumn peak. Miners in deep mines extracted 16.2 million tons of hard coal last month; despite vacations, this was more than planned. Since the beginning of the year, miners produced over 111.5 million tons of black fuel for domestic use and for export.

Daily records indicate that the labor efficiency in the mines is going up. Every day miners extract 633,000 tons of coal, 1,300 more than in the corresponding period last year. On Saturdays, when miners report to work voluntarily, they extracted 614,000 tons, 13,000 tons more than a year ago. It should be noted that since the beginning of the year, miners worked 147 working days, while last year they worked 149 days until the end of July. Despite this, mines' records show that miners have made up for one day. Currently, they are working to make up that other day missing in this year calendar.

While production is so high, it is necessary that coal be continually carried away from storage at the mines. Unfortunately, too few hoppers come to Silesia. Because of this, coal piles up by the mines and, currently, there is over 2 million tons of coal stored there. Strip miners are productive also; in July, they produced over 4 million tons of lignite. Since the beginning of the year, they delivered almost 33 million tons of lignite, mostly to electric power plants, 4 million tons more than last year. Power plant workers produced at a somewhat slower rate than expected. They produced 9.6 billion kilowatt hours which amounts to 98.4 per cent of the planned quantity. This was caused mostly by a decrease of demand for energy by the economy and the population. Despite the peak of vacation season for the operating crew, the maintenance crews and their contractors for special tasks continue the major maintenance and energy equipment modernization campaign. The 13,000 MW turbogenerators have been rebuilt and the 5,500 MW aggregates are under repair. Again, the scope of maintenance is greater than a year ago.

Although there is still some time left before winter comes, the energy producing people have started stocking fuel at the power plants. Over 4 million tons of coal are in open air storage and 120,000 tons of oil fuel

are stored in tanks. Both the progress of the maintenance program and the build up of fuel stocks testify that the preparations for the autumn-winter peak demand for energy are solid. The petroleum and natural gas producers furnished this year over 8.8 billion cubic meters of natural gas which included 3 billion cubic meters imported from the USSR. Unfortunately, many industrial plants still do not receive as much gas as they have ordered and is available. This may create serious problems in the autumn when the population will use more gas for heating and the industrial deliveries may have to be cut.

8801/12379

CSO: 2600/1013

POLAND

BRIEFS

**POLISH-GDR ARBITRATION TALKS**--A delegation of the GDR Council of Ministers Economic Arbitration Commission, led by Prof Gerhart Walter, has visited Poland. An exchange of experiences regarding the impact of arbitration on the operation of contracts in the national economy has taken place. Also discussed were matters related to the 12th Conference of the CEMA state arbitration commissions' leaders on the subject of arbitration control functions in the economy. The GDR visitors were received by Janusz Kubasiewicz, chief of the PZPR Central Committee Socio-Legal Department. Also present was the chairman of State Economic Arbitration Commission, Edward Zachajkiewicz. [Text] [Warsaw ZYCIE WARSZAWY in Polish 1 Aug 85 p 2] 8801

**CHINESE CO-OP VISITORS** --Since the 1st of August, at the invitation of the "Peasant Selfhelp" Central Cooperative Association, a delegation of the All-China Federation of Supply and Sale Cooperatives, led by Yang De Shou, secretary general of the federation, is visiting Poland. The delegation had discussions with the leadership of the Main Cooperative Council and the "Peasant Selfhelp." The Chinese delegation was received by Roman Malinowski, the chairman of Peasant Party Central Committee and a vice-premier. On 5 August, in Warsaw, an agreement was signed establishing cooperation between "Peasant Selfhelp" and All-China Federation of Cooperatives. [Text] [Warsaw RZECZPOSPOLITA in Polish 6 Aug 85 p 2] 8801

**POLISH, SOVIET PLANNERS MEET**--On 5 August, Vice-Premier Zbigniew Szalajda received Vladimir Lahtin, deputy chairman of the USSR Planning Commission. Matters related to the increased economic cooperation between the Soviet Union and Poland have been discussed. Especially emphasized was the necessity to increase specialization and coordination of production, to increase the level of trade and to undertake a series of new common projects. Franciszek Kubiczek, deputy chairman of the Council of Ministers Planning Commission, and Lev Vahramyev, the USSR charge d'affaires, also participated in the discussion. [Text] [Warsaw ZYCIE WARSZAWY in Polish 6 Aug 85 p 2] 8801

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YUGOSLAVIA

SFRY-EFTA COMMITTEE ISSUES STATEMENT ON TRADE

AU221207 Belgrade BORBA in Serbo-Croatian 9 Oct 85 p 6

[Text] Dubrovnik, 8 October (TANJUG)--Yugoslavia and the EFTA countries have declared themselves in favor of a further advance in economic cooperation, particularly in the sphere of trade, joint industrial investment, and tourism.

Possibilities must be sought for improving the exchange of business information and direct contacts of businessmen, it is pointed out in the final statement of the Ninth Session of the Joint Committee for Cooperation which was held in Dubrovnik.

The Yugoslav delegation, led by Dr Ljubomir Baban, member of the Federal Executive Council, pointed out the need to intensify our exports to EFTA member-countries--Austria, Switzerland, Sweden, Norway, Finland, Iceland, and Portugal. Although those countries account for only 6 percent of Yugoslav imports deficit in trade with them is about 15 percent of the total Yugoslav trade deficit.

In conformity with the 1983 declaration on cooperation between Yugoslavia and EFTA countries, it is necessary, as our delegation pointed out, that customs and other obstacles in the way of the access of Yugoslav commodities--in particular industrial products--to the EFTA countries market be removed, that import deductions be expanded, and demands for self-restriction from our exporters be avoided.

Increased Yugoslav exports are a prerequisite for the repayment of debts to foreign countries, the modernization of the economy, and this would make it possible for our imports--from EFTA countries as well--to be increased.

It was pointed out that long-term cooperation, joint investment, and appearance on third markets offer the best possibilities for balancing commodity exchange at a higher level.

Representatives of EFTA countries hailed the easing of the law on foreign investment and expressed the opinion that the joint group of legal experts which is working on interpretation of the new provisions should conclude its work as soon as possible and that its results should be submitted, as was said, to the business community in EFTA countries.

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YUGOSLAVIA

COUNTRY TO BE SELF-SUFFICIENT IN IRON ORE

LD231309 Belgrade TANJUG in English 0028 GMT 23 Oct 85

[Text] Prijedor, 23 October (TANJUG)--Yugoslavia will no longer import iron ore as the newly-opened Omarska mine near here starts operation early November. So far the country's iron and steel works had to earmark about 70 million dollars for iron ore imports annually.

The Omarska mine's annual capacity amounts to 1.7 million tonnes of 54 percent metal content ore.

The mine, built at a total cost of 20 billion dinars (67 million dollars), will operate with the most up-to-date equipment made in the Federal Republic of Germany, France, and the USSR. The mine also assembled a mammoth-sized crushing installation with an hourly capacity of about a thousand tonnes of ore.

The local deposits are estimated at 113 million tonnes of high iron content ore, which may meet Yugoslav iron works' demand for a lengthy period.

Yugoslavia's 14 iron ore mines (the largest being Ljubija outside Prijedor) turn out a total of 5.3 million tonnes of ore, or less than the domestic demand which had required additional imports.

This year, 8 of the Yugoslav iron and steel works, together with 2,500 metal-working enterprises of some size, are to market about 5 million tonnes of the different steel-made products. The bulk (1.8 million tonnes) is to be supplied by the Zenica works from Zenica, followed by Smederevo, and by the Slovenske Zelezarne works at Store, Ravne, and Jesenice.

The Yugoslav iron and steel exporters this year will sell abroad a total of 660,000 tonnes of their products, predominately in the USSR, China, Iraq, Iran, France, Romania, the Federal Republic of Germany, Algeria and Kenya.

The Yugoslav metal-working manufacturers will export to the different countries a variety of semi-finished or finished products worth 4,000 million dollars.

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YUGOSLAVIA

BRIEFS

**FIRST TEACHERS' STRIKES**--For the first time in the history of the Yugoslav school system there have been teacher strikes, i.e., seven work stoppages in the first half of this year in elementary, intermediate, and advanced schools in four republics, namely, Serbia, Croatia, Slovenia, and Macedonia. The reason: low personal earnings and the difficult material situation of educational centers. The work stoppages have lasted 1 to 4 hours. In all cases they were settled very quickly: all sociopolitical workers in the "structure" met and the funds were found so official and long stoppages were avoided. [Excerpt] [Belgrade RAD in Serbo-Croatian 4 Oct 85 p 15]

**OIL IMPORTS**--In the first 8 months of this year we imported a total of 6.038 million tons of crude oil or 62.3 percent of the total amount imported last year, when a total of 9.69 million tons were purchased on the foreign market. This year we have paid \$1.38 billion for oil imports, which is \$1 less per ton than last year. Croatia imported 2.18 million tons valued at \$495 million, 57 percent of which was from the convertible market and 43 percent from the clearing account area. Vojvodina imported 2.8 million tons valued at \$460 million, with 36.3 percent from the convertible currency market and 63.7 percent from the clearing account area. Bosnia-Herzegovina imported 962,000 tons for \$220 million, with 28.6 percent from the convertible area and 71.4 percent from the clearing account area; while Macedonia imported 685 million tons valued at \$158 million, 31 percent from the convertible area and the remainder from the clearing account area. The remaining 200,000 tons were imported for Serbia proper (85,000 tons valued at \$19 million) and the Federation (115,000 tons for \$26 million). [Excerpt] [Belgrade PRIVREDNI PREGLED in Serbo-Croatian 26 Sep 85 p 3]

**ELECTRIC POWER OUTLOOK**--It is now estimated (with 70 percent probability) that by the end of the year there will be a shortage of 1.396 billion kwh of electric power even if water levels in streams are normalized; if they remain at the present level it is estimated (with 90 percent probability) that the shortage will amount to 2.576 billion kwh. The results of the drought are being felt most by consumers in Bosnia-Herzegovina, Croatia, and Vojvodina, while the first stage of power savings has already been introduced in Slovenia. Saving measures will also have to be taken in other parts of the country. The only areas where a surplus of power product is expected are in Kosovo (with an anticipated surplus of 278 million kwh) and Slovenia (171 million kwh). [Excerpt] [Belgrade PRIVREDNI PREGLED in Serbo-Croatian 9 Oct 85 p 1]

**POWER PRODUCTION, CONSUMPTION**--In the first 9 months of this year nearly 49.5 billion kwh of electric power was produced and about 500 million kwh less [than that produced] was consumed. Most was produced, as usual, by coal-fired thermoelectric power plants, namely, 26.5 billion kwh, which is 1 percent less than the plan but 7 percent more than in the same 1984 period. Hydroelectric power plants produced about 18.4 billion kwh, also 1 percent below the plan and 1 percent above last year's production. Liquid-fuel- or gas-based thermoelectric power plants which produced 1.8 billion kwh, in view of the fact that they included also those based on mazut, surpassed the plan by 15 percent and exceeded last year's production by 40 percent. The Krsko nuclear power plant produced 2.7 billion kwh, or 10 percent less than last year because repairs were carried out, earlier this year than last. Furthermore, nearly 1.65 billion kwh of power were exported in this period, about 950 million kwh of which were sold and the remainder exchanged with other power systems. At the same time about 1.15 billion kwh were purchased from abroad and 850 million kwh were borrowed. On 30 September storage lakes contained enough water to produce about 2 billion kwh which is about 200 million kwh less than the plan and 1.35 billion kwh less than last year at that time. [Text] [Belgrade EKONOMSKA POLITIKA in Serbo-Croatian 14 Oct 85 pp 29-30]

**LOWER AGRICULTURAL PRODUCTION**--This year agricultural production will be 11 percent lower than last year, according to the Federal Committee for Agriculture. Wheat production will be 13.8 percent lower, corn 17.5 percent lower, sugar beets 4.6 percent lower, soybeans 36 percent lower, rapeseed 7.8 percent lower, while rice production will remain the same as last year and sunflower production will be 43 percent higher. Meat production will also be 11 percent less (beef 3 percent, meat from pigs 21 percent, poultry 4 percent, and lamb 5 percent less). Production from vineyards and orchards will also decline due to the prolonged frost at the beginning of this year and the subsequent drought. The value of agricultural production will be 158 billion dinars below the plan for this year and 130 billion dinars below last year. According to Milorad Stanojevic, president of the committee, this year only one subsidy was given to agriculture, namely for mineral fertilizers, but even this was not done in certain republics because there was no money. Credit and re-discount policy in our system has been reduced to the level of protective prices, and in this area we have taken 20-30 percent away from agriculture. In regard to working capital, 80 percent of this is bank loans on which interest rates of 50-60 percent are being paid. Agriculture is in need of concrete measures, above all, reprogramming of its working capital, reduction of interest rates, and elimination of price disparity. Chaos now characterizes the agricultural market and this is "murderously" reflected in production, Stanojevic said. Last year when there was record production in some segments of agriculture losses were 3 to 4 times higher and this year when production has fallen losses will be even more. The situation is best illustrated by livestock-raising where 122 dinars must be paid in interest for every 100 dinars of income. While prices of flour, bread, sugar, and cooking oil are [legislatively] controlled, they have still not been brought into agreement with production costs and producers of these items are piling up billions of dinars in losses. [Excerpt] [Belgrade PRIVREDNI PREGLED in Serbo-Croatian 19-21 Oct 85 p 12]



TOBACCO, CIGARETTE EXPORTS--Belgrade, 23 October (TANJUG)--By the end of the current year, Yugoslavia is expected to export 22.8 thousand tonnes of fermented tobacco and cigarettes valued at 83.5 million dollars. The biggest Yugoslav exporters of tobacco and tobacco products are Makedonija Tabak of Skopje, Republic of Macedonia, and Centroprom of Belgrade. The Yugoslav tobacco industry markets its products in 22 countries throughout the world. The chief buyers of Yugoslav tobacco are the United States, the Soviet Union, Egypt, Czechoslovakia, the German Democratic Republic and Switzerland. In Egypt and Algeria, tobacco is counter-traded for oil, cotton and flax. [Text] [Belgrade TANJUG in English 0827 GMT 23 Oct 85 LD]

YUGOSLAV-ALBANIAN RAILWAY--Titograd, 4 October (TANJUG)--The construction of the Yugoslav section of the international railway line between Titograd and the Albanian town of Shkoder has been completed. Experts are now testing the bridges, tunnels, cuttings, the track and signalling installations on the 25-km-long stretch before giving their final approval. The investment in the Yugoslav section of the link is estimated at some 30 billion dinars (about 100 million dollars). The Titograd-Shkoder railway, the first rail connection between Yugoslavia and Albania, is Albania's first link with the international railway system. [Text] [Belgrade TANJUG in English 1545 GMT 4 Oct 85 LD]

TALKS WITH EFTA CONCLUDE--Dubrovnik, 8 October (TANJUG)--The mixed Yugoslavia-EFTA Committee ended its meeting here today in calling for improved cooperation in trade, joint ventures, and tourism. A communique said a wider exchange of economic information and more contacts between businessmen were necessary. Commodity trade, it said, could be balanced off still better especially through long-range coproduction, joint ventures, and joint sales in Third countries. [Excerpt] [Belgrade TANJUG in English 1722 GMT 8 Oct 85 LD]

ITALIAN-DESIGNED AUTOMOBILE PRODUCTION--Kragujevac, 9 October (TANJUG)--Giorgio Giugiaro, a leading designer at Italy's Italo Design firm, has designed the bodies of two new automobile models to be manufactured by Crvena Zastava of Kragujevac (east Yugoslavia). The new "103" and "104" models will appear on the market in late 1987 and early 1988. The prototypes will undergo extensive testing early next year. Both the "103" hatchback model and the "104" Berlina will be powered by engines ranging from 1100 to 1800 ccm. Equipped with electronic devices facilitating steering and engine monitoring, they will be the most luxurious models to be made by Zastava. The new models are the result of Crvena Zastava's cooperation with Italy's Fiat. Zastava's 1985 output will total 203,000 cars and trucks, of which 60,000 will be exported. It also plans to expand its production by another 100,000 cars a year. [Excerpts] [Belgrade TANJUG in English 0130 GMT 9 Oct 85 LD]

NEW CARBON DIOXIDE FACTORY--Becej, 9 October (TANJUG)--A new factory producing carbon dioxide in gas and liquid form has started operations in Becej, Yugoslav Province of Vojvodina. The factory, the first of its kind in Yugoslavia, will produce around 80,000 tonnes of carbon dioxide a year, some 55,000 tonnes in gas and 25,000 tonnes in liquid form. The gas will be used for the production of dry ice. Experts estimate that the gas deposits near Becej, used by the factory, will be sufficient for the next 150 years. [Excerpts] [Belgrade TANJUG in English 0145 GMT 9 Oct 85 LD]



ISKRA ON SOVIET MARKET--Ljubljana, 22 October (TANJUG)--The Iskra Associated Enterprises of Ljubljana (northwestern Yugoslavia) will this year export to the Soviet Union 82 million dollars worth of products involving in the main high-voltage equipment, telephone exchanges, TV sets and electrical automotive equipment. Under the programme of cooperation with the Soviet partners Iskra exports to this market its telephone exchanges "Metakonta 10." Two such exchanges will this year be installed in Moscow and Simferopol. Cooperation in the field of automatic equipment for machine tools has been expanded. Iskra expects to this year export to the Soviet Union some 280 million dollars worth of products. [Text] [Belgrade TANJUG in English 0930 GMT 22 Oct 85 LD]

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